Traffic Safety Problem Identification in Michigan's Upper Peninsula:

An Exploration of Crash, Travel, Demographic and Economic Data

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16. Abstract

This is a report documenting five-year trends in traffic crashes in Michigan's Upper Peninsula (UP). This report provides background information necessary for the Michigan Office of Highway Safety Planning to set and evaluate traffic safety goals and to prioritize program efforts in the UP.

The most important findings related to improving traffic safety in Michigan's Upper Peninsula include:

- Males age 21-34 and 35-54 represent the groups with the largest number of KA crashes in the UP. The second most prevalent KA crash groups are females age 21-34, females age 35-54, and males age 16-20.
- Upper Peninsula crash patterns that match state patterns include KA crashes by:
  - day of week (high Friday, Saturday)
  - light condition (mostly in daylight)
  - speed limit (mainly on roads with a 55 mph speed limit)
  - weather conditions (mostly clear, but slightly higher proportion of KA crashes in snow)
  - road surface condition (mostly dry, but higher proportion of KA crashes on icy or snowy conditions).
- Upper Peninsula crash patterns that differ from state patterns include KA crashes by:
  - month (there are more pronounced peaks in June through August and November through February than for the state as a whole)
  - highway class (crashes are more evenly distributed across road types in the UP than is the case statewide with the notable lack of interstate miles and subsequent KA crashes in the UP)
  - had-been drinking (HBD) crashes (the rate of KA-HBD crashes is considerably higher than for the state taken as a whole, from 40% to 50% higher for the UP).

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Executive Summary

Number of Crashes in the Upper Peninsula by Year							
Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes in UP	% KA Crashes Statewide	KA Rate per 100 Million VMT	KA Rate per 1000 Registered Vehicles	KA Rate per 1000 Population
1995	18656	606	3.25%	3.54%	20.04	2.01	1.94
1996	18621	529	2.84%	3.17%	17.10	1.72	1.70
1997	16569	510	3.08%	3.02%	16.24	1.64	1.63
1998	15473	502	3.24%	3.02%	16.01	1.59	1.60
1999	17422	418	2.40%	2.90%	13.13	1.30	1.34
Change 95 to 99	-6.61%	-31.02%	-26.14%	-18.08%	-34.46%	-35.37%	-30.66%
Change 98 to 99	12.60%	-16.73%	-26.05%	-4.13%	-17.96%	-18.46%	-16.35%

The table above lists the total number of crashes in the Upper Peninsula (UP) and the number of KA crashes each year along with their associated rates. The last row of the table shows the percent increase or decrease in the indicated measure in the 1-year period 1998 to 1999. Similarly, the second to last row shows the percent increase or decrease in the indicated measure in the 5-year period 1995 to 1999. For example, in the column titled Number of KA Crashes, you can see that the figure in the next-to-last row, Change 95 to 99, is -31.02%. This means that there were 31.02% fewer KA crashes in 1999 than in 1995. The table above indicates that crash statistics for the Upper Peninsula are quite similar to the state as a whole.

Males age 21-34 and 35-54 represent the largest problem age/sex groups in terms of the number of KA crashes in the UP. The second most prevalent KA crash groups are: females age 21-34, females age 35-54, and males age 16-20. While each of these secondary groups experience about the same number of KA crashes each year, the crash rate for males age 16-20 is considerably higher than for the other groups.

Subsets of factors related to the crashes for the Upper Peninsula seem to match patterns found for the entire state with few exceptions. Upper Peninsula crash patterns that match state patterns include KA crashes by:

- day of week (high Friday, Saturday)
- light condition (mostly in daylight)
- speed limit (mainly on roads with a 55 mph speed limit)
- weather conditions (mostly clear, but slightly higher proportion of KA crashes in snow)
- road surface condition (mostly dry, but higher proportion of KA crashes on icy or snowy conditions).

Upper Peninsula crash patterns that differ from state patterns include KA crashes by:

- month (there are more pronounced peaks in June through August and November through February than for the state as a whole)
- highway class (crashes are more evenly distributed across road types in the UP than is the case statewide with the notable lack of interstate miles and subsequent KA crashes in the UP)
- had-been drinking (HBD) crashes (the rate of KA-HBD crashes is considerably higher than for the state taken as a whole, from 40% to 50% higher for the UP).

County breakdowns of total crashes and KA crashes were matched with county economics, demographics and travel information in order to see specific patterns/ correlations. There are no no strong or consistent patterns across the counties.

The top five counties for KA crashes in the UP are:

	Number of KA Crashes 1995-1999	**% KA Crashes**	**KA Rate per 100 Million VMT**	**KA Rate per 1000 Population**
Marquette	415	2.95%	14.30	1.32
Houghton	289	4.13%	28.93	1.62
Delta	275	2.24%	12.70	1.42
Chippewa	273	3.20%	15.80	1.45
Menominee	242	2.48%	20.11	1.98

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Introduction

For a number of years the Michigan Office of Highway Safety Planning (OHSP) has had a staff member assigned to Michigan's Upper Peninsula (UP) because of the unique social, economic, climatic, and transportation-related qualities of this region. The purpose of this report is to document traffic crash, travel, demographic, and economic data specific to Michigan's UP for the purpose of better understanding how to develop and disseminate programs to improve traffic safety in the UP. To set the stage for the data analyses, a brief summary of the history of the UP is provided.

The following historical information on Michigan's Upper Peninsula is taken from the Northern Michigan University UP Studies Center (http://www.nmu.edu/upstudies/UPinfo/UPHIST.HTM).

> Michigan's Upper Peninsula is a unique region in the United States. It is surrounded by three Great Lakes (Superior, Huron and Michigan) and the state of Wisconsin. For years although part of the state of Michigan, it was physically isolated from the rest of the state by the Straits of Mackinac. Back in 1836 when Michigan was moving toward statehood, the down state people did not want the region attached to the state for a variety of reasons. As a result the Upper Peninsula has grown and developed on its own.
>
> After statehood in 1837, the State of Michigan had the Upper Peninsula surveyed linearly and geologically under the direction of Douglass Houghton and others. In the mid-1840s copper was discovered on the Keweenaw Peninsula and iron ore in the central Upper Peninsula inland west of Marquette. This began "copper fever" which attracted thousands of American and immigrants to the economic opportunities of this mining frontier. The California Gold Rush might be more famous, but Michigan ultimately produced more mineral wealth.
>
> It was iron and copper that brought the first great population boom to the region. The first immigrants to enter the Upper Peninsula were the Cornish with their centuries of mining knowledge followed by the Germans and Irish fleeing famine and political unrest in the Old Country, and French Canadians. In the late 19th century came immigrants from Italy, Finland, Scandinavia, Poland, Russia, the Austro-Hungarian Empire, Wales and Scotland and even from the Isle of Man and China. These people brought with them their ethnic traditions and foods. In 1917 a writer for the National Geographic Magazine could say that when you left Houghton and traveled to Calumet some ten miles away it was like entering a foreign land. Ethnic churches, newspapers, clubs, and shops dominated the community where over 75% of the population was foreign-born. Similar conditions existed throughout the Upper Peninsula. This immigrant tradition has left the region with what folklorist, Richard Dorson called dialectic folklore.
>
> The "Golden Age" of the Upper Peninsula was between 1880 and 1913. Economic opportunity attracted hundreds and then thousands of people. During the summer season ore boats sailed round the clock to get the ore to industrial centers. Today this tradition continues. Jobs could be found in the expanding timber industry where the rich white pine forests were quickly cut and then the hard woods were taken. In 1893 as a tribute to the logging industry, the World's FairLoad was sent to Chicago and viewed by visitors with astonishment. Commercial fishing brought prosperity to many towns along the lakes. Railroads crisscrossed the region and connected the Upper Peninsula with Detroit, Chicago, and Minneapolis, an overnight trip to the south.

Unfortunately these were extractive industries and little wealth was left in the land. The environment had been altered and the land polluted. An infamous copper strike in Calumet and adjacent towns in 1913-1914 sent hundreds of people to other locations. It must be remembered this is when Henry Ford in Detroit was offering to workers the $5 a day, 8-hour workday. The Roaring Twenties was in many ways the last gasp of the copper industry and the forests were rapidly being depleted.

In the years since World War II the Upper Peninsula has gone through another set of changes. By the 1950s conditions looked bleak. The fabled Calumet & Hecla Copper Mine was in the process of closing. Iron mines throughout the Peninsula were hitting low-grade ore and were closing. Then a new enriched iron ore called taconite, developed by the Cleveland Cliffs Mining Company, revitalized the mines on the Marquette Iron Range.

Tourism quickly became a new industry for many communities. The area's heavy snowfall has allowed skiing to develop as a major industry in some communities, as in the Ironwood area. Throughout the year a variety of celebrations and festivals are celebrated across the Peninsula.

Today the Upper Peninsula is home to the Isle Royale National Park , Pictured Rocks National Lakeshore, Keweenaw National Historic Park and numerous state parks. Mackinac Island at the eastern end of the Upper Peninsula continues to be a major tourist destination as it has been since the 1830s when the Sardinian and Austrian ambassadors spent their summers there.

Overall Crash Statistics

Number of Crashes in the Upper Peninsula by Year							
Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes in UP	% KA Crashes Statewide	KA Rate per 100 Million VMT	KA Rate per 1000 Registered Vehicles	KA Rate per 1000 Population
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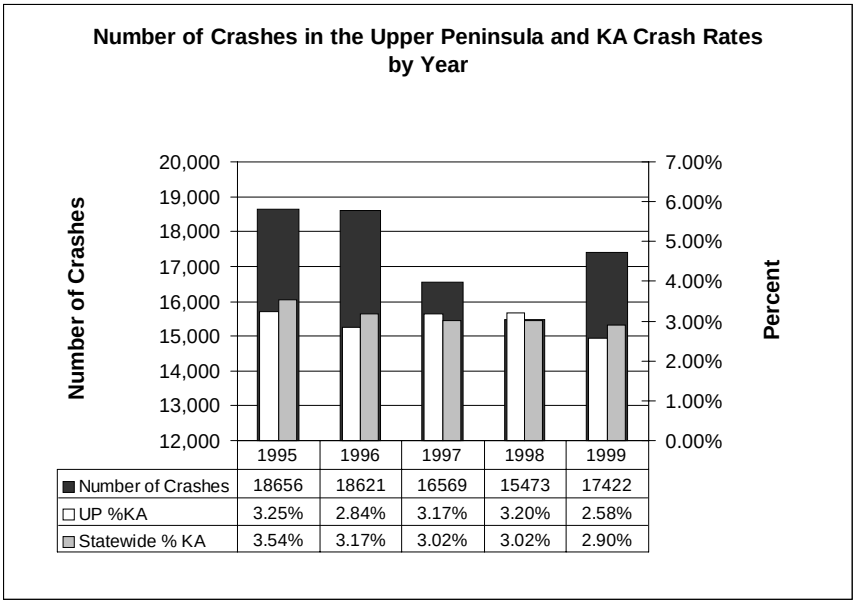

Overall crash statistics of the UP are quite similar to the state as a whole.

2.5% of all statewide KA crashes occur in the top 5 UP crash counties.

Every 10% reduction in ALL of these five counties represents a statewide gain of 0.25%.

A 1.0% reduction statewide would require a 40% reduction in all five counties.

	Number of KA Crashes 1995-1999	% KA Crashes	KA Rate/ 100 Million VMT	KA Rate/ 1000 Population
Marquette	415	2.95%	14.30	1.32
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Delta	275	2.24%	12.70	1.42
Chippewa	273	3.20%	15.80	1.45
Menominee	242	2.48%	20.11	1.98

Crashes by Age and Sex

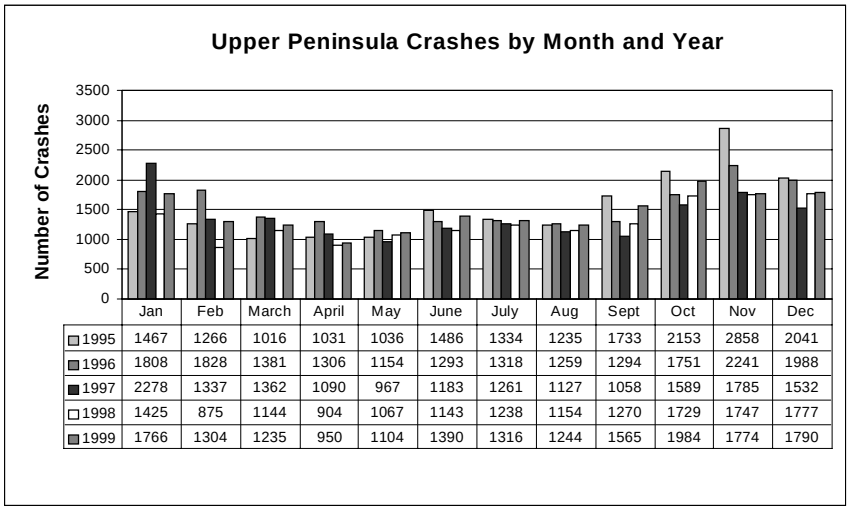
Number of Crashes in the Upper Peninsula by Age, Sex, and Year				
Driver Age	Sex	Year	Total Crashes	KA Crashes
16-20 yr	F	95	1358	50
		96	1423	53
		97	1411	49
		98	1216	47
		99	1399	41
		Change 95 to 99	3.02%	-18.00%
		Change 98 to 99	15.05%	-12.77%
	M	95	2170	91
		96	2288	83
		97	2068	88
		98	1856	90
		99	2056	46
		Change 95 to 99	-5.25%	-49.45%
		Change 98 to 99	10.78%	-48.89%
21-34 yr	F	95	2404	85
		96	2423	60
		97	2080	57
		98	1828	59
		99	2064	45
		Change 95 to 99	-14.14%	-47.06%
		Change 98 to 99	12.91%	-23.73%
	M	95	4160	182
		96	4045	146
		97	3377	130
		98	2950	122
		99	3192	88
		Change 95 to 99	-23.27%	-51.65%
		Change 98 to 99	8.20%	-27.87%
35-54yr	F	95	2838	79
		96	3006	81
		97	2738	71
		98	2569	60
		99	2860	70
		Change 95 to 99	0.78%	-11.39%
		Change 98 to 99	11.33%	16.67%
	M	95	4654	152
		96	4862	157
		97	4303	133
		98	3907	128
		99	4422	119
		Change 95 to 99	-4.98%	-21.71%
		Change 98 to 99	13.18%	-7.03%

Driver Age	Sex	Year	Total Crashes	KA Crashes
55-69yr	F	95	746	25
		96	779	20
		97	709	19
		98	691	21
		99	738	20
		Change 95 to 99	-1.07%	-20.00%
		Change 98 to 99	6.80%	-4.76%
	M	95	1579	64
		96	1668	38
		97	1428	47
		98	1406	43
		99	1609	43
		Change 95 to 99	1.90%	-32.81%
		Change 98 to 99	14.44%	0.00%
70+yr	F	95	453	24
		96	500	20
		97	499	23
		98	456	23
		99	528	14
		Change 95 to 99	16.56%	-41.67%
		Change 98 to 99	15.79%	-39.13%
	M	95	896	44
		96	962	44
		97	839	30
		98	768	35
		99	834	25
		Change 95 to 99	-6.92%	-43.18%
		Change 98 to 99	8.59%	-28.57%

Males age 21-34 and 35-54 represent the largest problem age/sex groups in terms of number of KA crashes.

Females age 21-34, females age 35-54, and males age 16-20 each experience about the same number of KA crashes each year, but the crash rate for males age 16-20 (not shown) is considerably higher than for the two female groups. For this reason, males age 16-20 may also represent an important target group.

Crashes by Month and Year

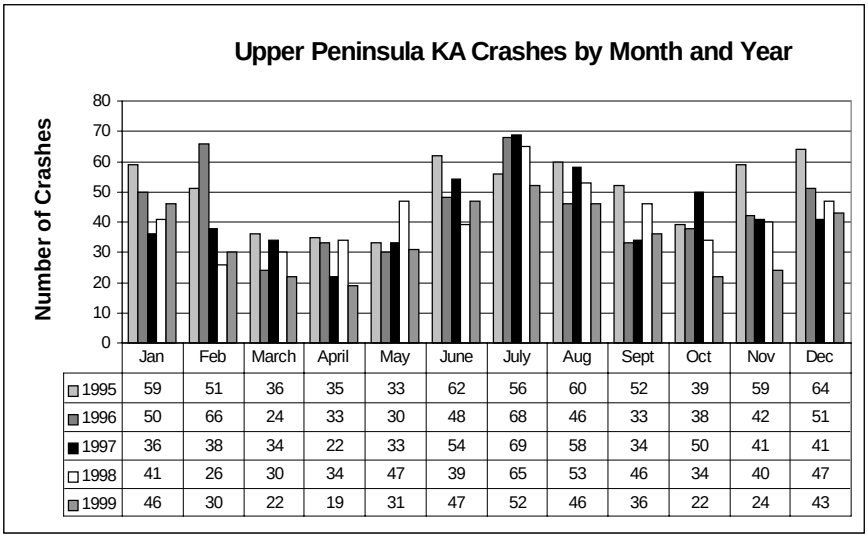


	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1995	1467	1266	1016	1031	1036	1486	1334	1235	1733	2153	2858	2041
1996	1808	1828	1381	1306	1154	1293	1318	1259	1294	1751	2241	1988
1997	2278	1337	1362	1090	967	1183	1261	1127	1058	1589	1785	1532
1998	1425	875	1144	904	1067	1143	1238	1154	1270	1729	1747	1777
1999	1766	1304	1235	950	1104	1390	1316	1244	1565	1984	1774	1790

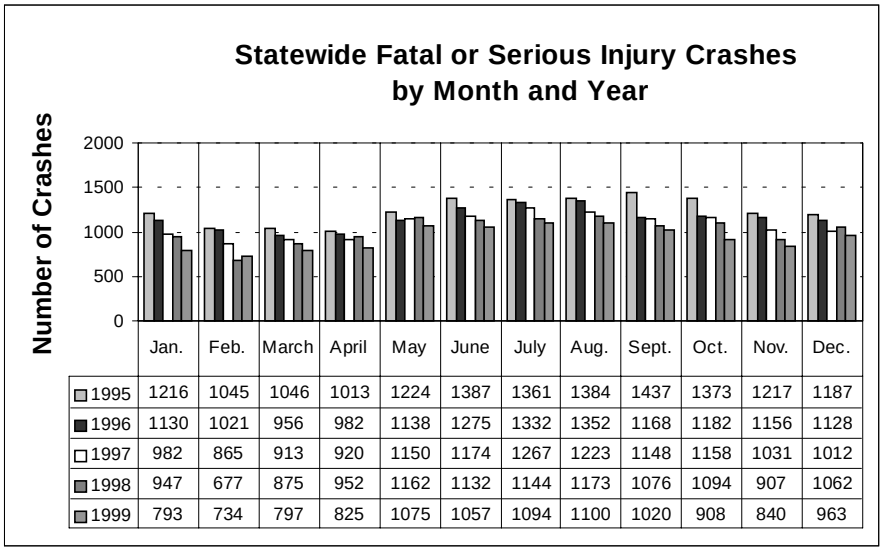
Compared to the state as a whole, there appears to be a more pronounced seasonal pattern to KA crashes in the UP.

The peaks in the UP occur in the June through August and November through February periods.

These periods may represent times during which tourists and sportspersons from outside the UP come to enjoy the peak summer and winter activity months.

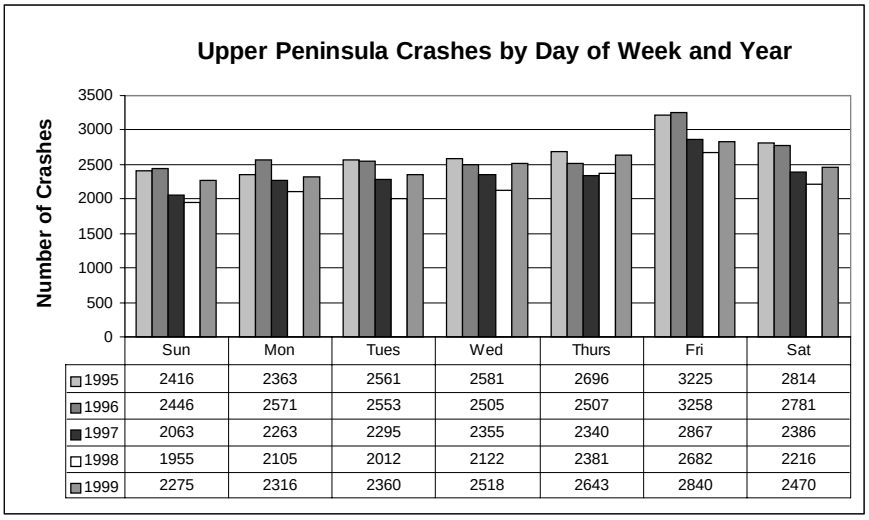


	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1995	59	51	36	35	33	62	56	60	52	39	59	64
1996	50	66	24	33	30	48	68	46	33	38	42	51
1997	36	38	34	22	33	54	69	58	34	50	41	41
1998	41	26	30	34	47	39	65	53	46	34	40	47
1999	46	30	22	19	31	47	52	46	36	22	24	43



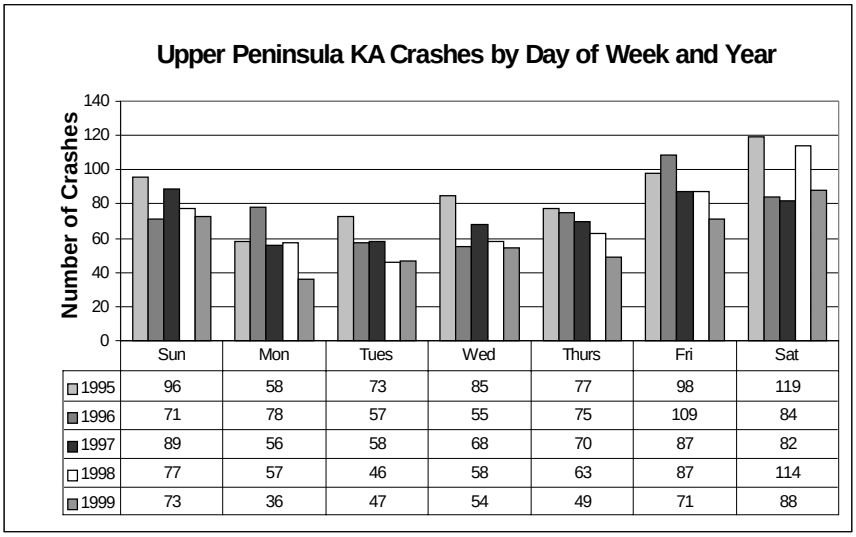
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1995	1216	1045	1046	1013	1224	1387	1361	1384	1437	1373	1217	1187
1996	1130	1021	956	982	1138	1275	1332	1352	1168	1182	1156	1128
1997	982	865	913	920	1150	1174	1267	1223	1148	1158	1031	1012
1998	947	677	875	952	1162	1132	1144	1173	1076	1094	907	1062
1999	793	734	797	825	1075	1057	1094	1100	1020	908	840	963

Crashes by Day of Week

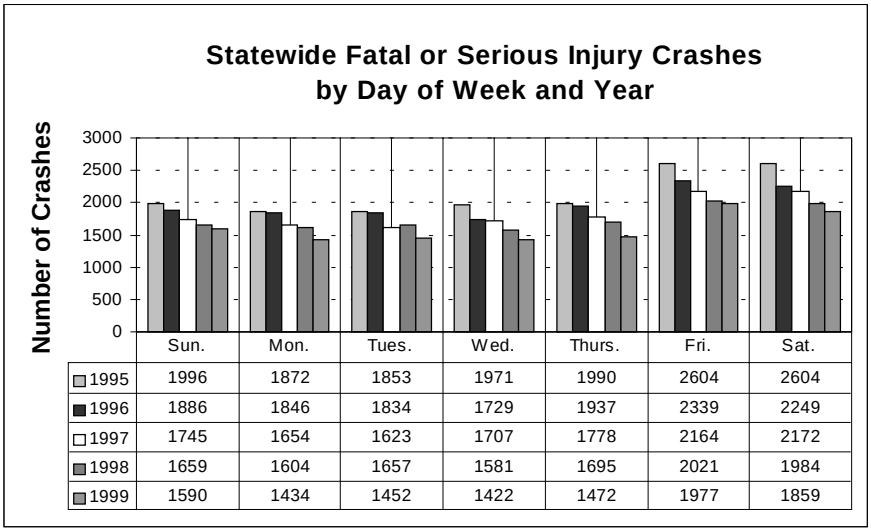


	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1995	2416	2363	2561	2581	2696	3225	2814
1996	2446	2571	2553	2505	2507	3258	2781
1997	2063	2263	2295	2355	2340	2867	2386
1998	1955	2105	2012	2122	2381	2682	2216
1999	2275	2316	2360	2518	2643	2840	2470

Compared to the state as a whole, there appears to be proportionally more KA crashes on Sunday and fewer Monday through Wednesday. This may represent an opportunity to better concentrate traffic safety efforts on these days.

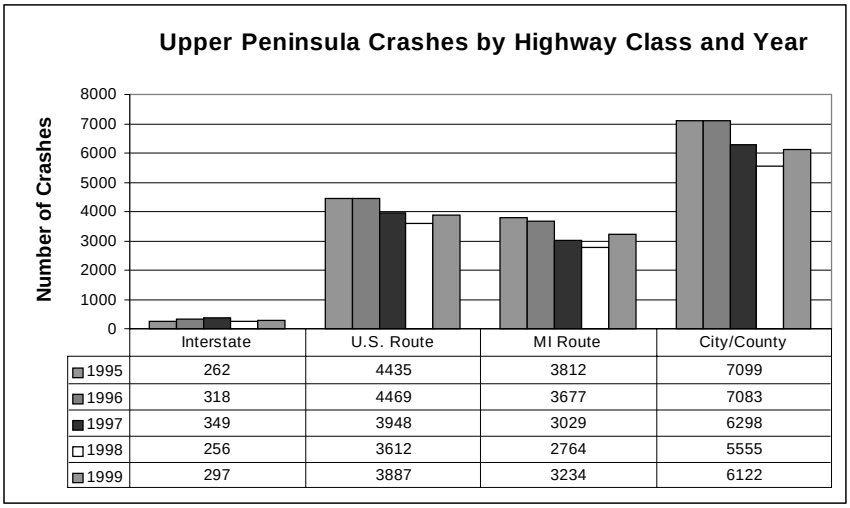


	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1995	96	58	73	85	77	98	119
1996	71	78	57	55	75	109	84
1997	89	56	58	68	70	87	82
1998	77	57	46	58	63	87	114
1999	73	36	47	54	49	71	88



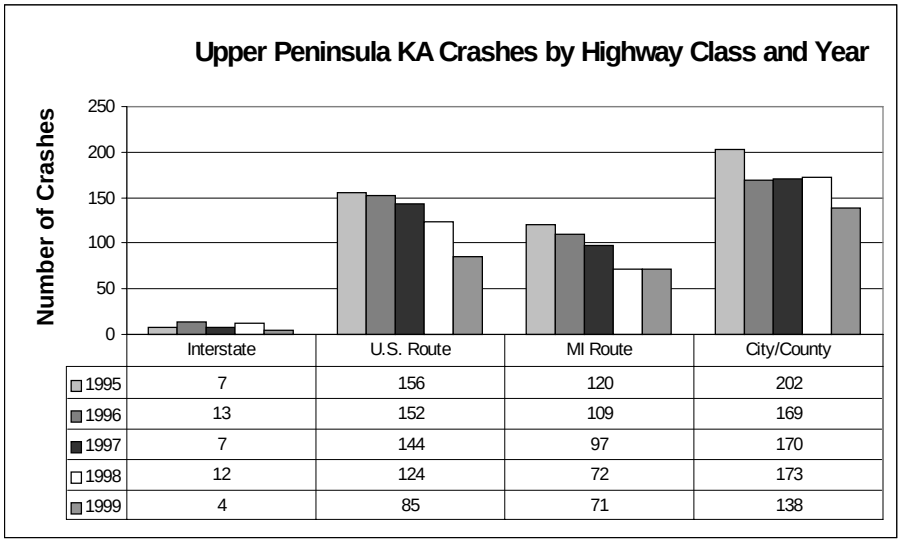
	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
1995	1996	1872	1853	1971	1990	2604	2604
1996	1886	1846	1834	1729	1937	2339	2249
1997	1745	1654	1623	1707	1778	2164	2172
1998	1659	1604	1657	1581	1695	2021	1984
1999	1590	1434	1452	1422	1472	1977	1859

Crashes by Highway Class

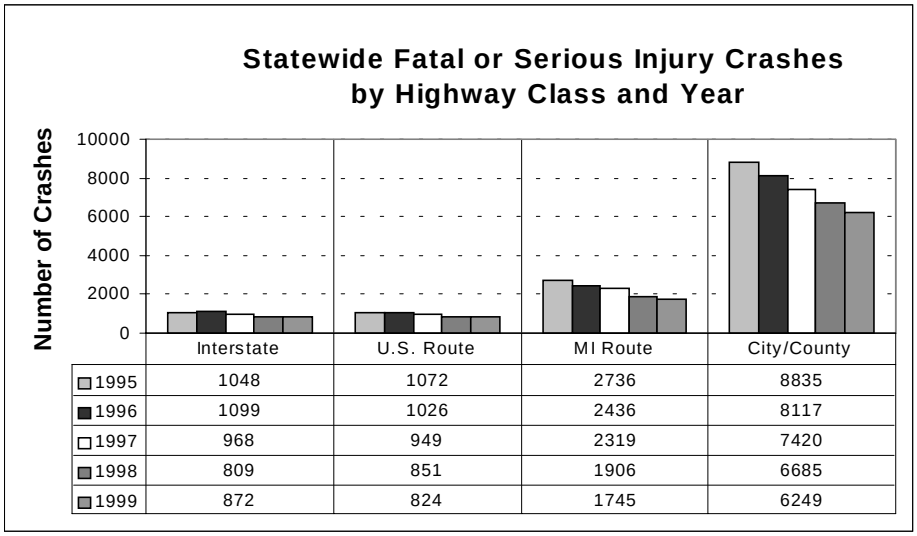


	Interstate	U.S. Route	MI Route	City/County
1995	262	4435	3812	7099
1996	318	4469	3677	7083
1997	349	3948	3029	6298
1998	256	3612	2764	5555
1999	297	3887	3234	6122

Unlike the state taken as a whole, KA crashes in the UP are distributed more evenly across US routes, MI routes and city/county roads. However, more KA crashes still occur on city/county roads.

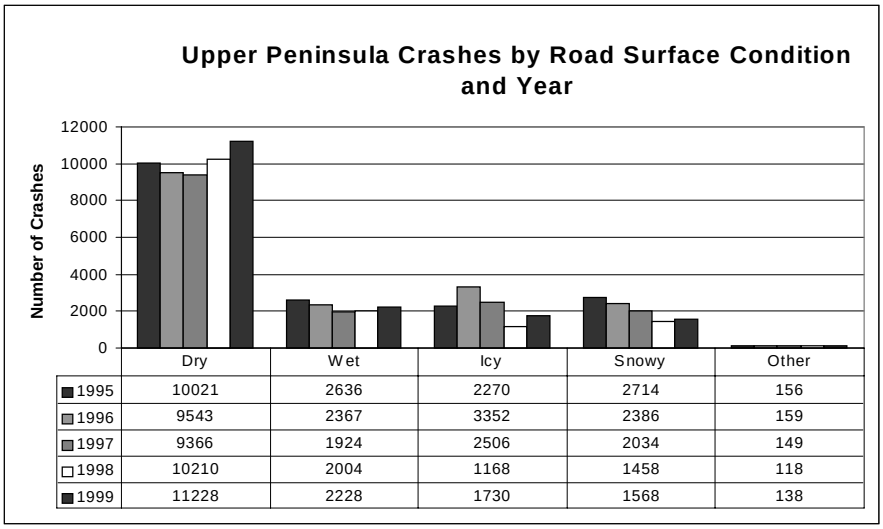


	Interstate	U.S. Route	MI Route	City/County
1995	7	156	120	202
1996	13	152	109	169
1997	7	144	97	170
1998	12	124	72	173
1999	4	85	71	138



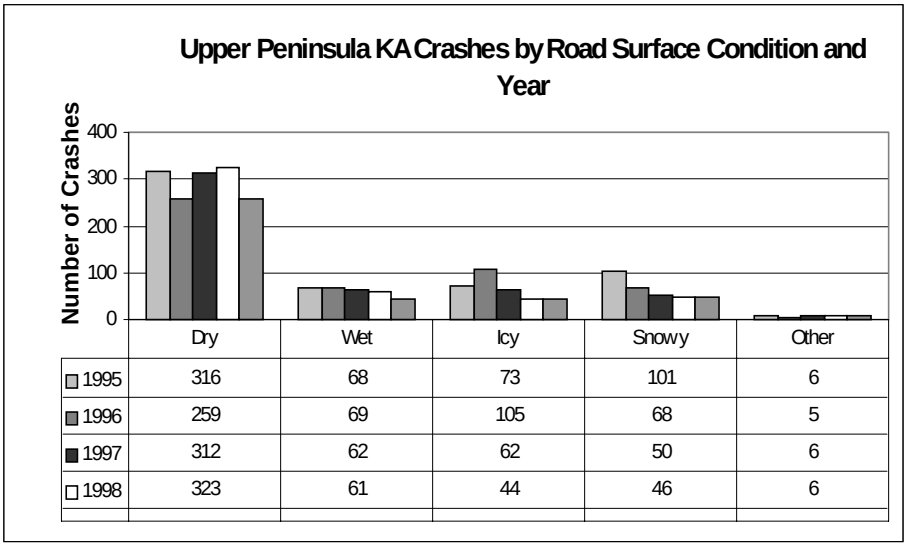
	Interstate	U.S. Route	MI Route	City/County
1995	1048	1072	2736	8835
1996	1099	1026	2436	8117
1997	968	949	2319	7420
1998	809	851	1906	6685
1999	872	824	1745	6249

Crashes by Road Surface Condition

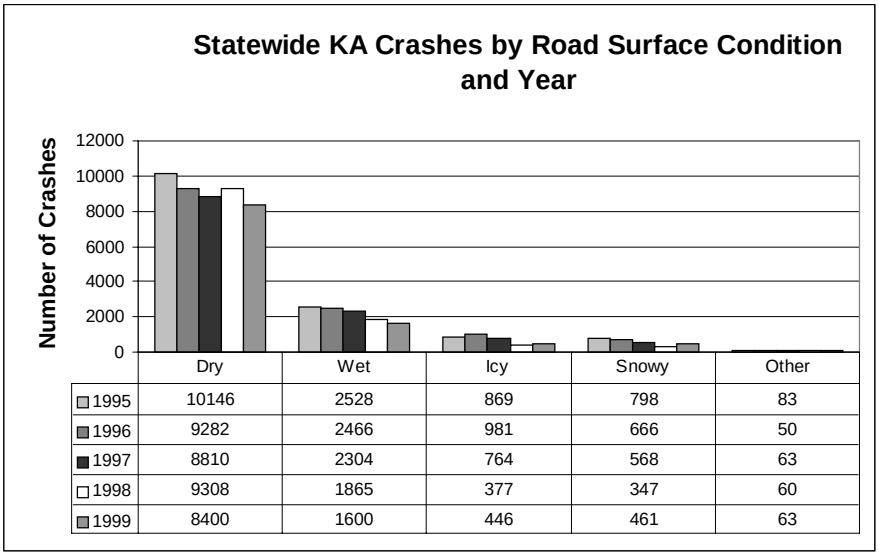


	Dry	Wet	Icy	Snowy	Other
1995	10021	2636	2270	2714	156
1996	9543	2367	3352	2386	159
1997	9366	1924	2506	2034	149
1998	10210	2004	1168	1458	118
1999	11228	2228	1730	1568	138

Poor road surface conditions are cited more often in KA crashes in the UP than the state taken as a whole. Notably, snow and ice conditions are noted as frequently as wet road conditions.

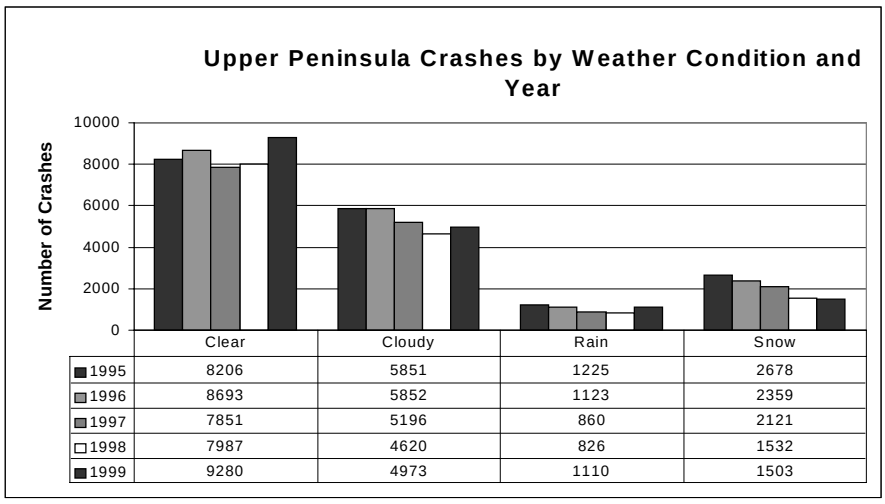


	Dry	Wet	Icy	Snowy	Other
1995	316	68	73	101	6
1996	259	69	105	68	5
1997	312	62	62	50	6
1998	323	61	44	46	6



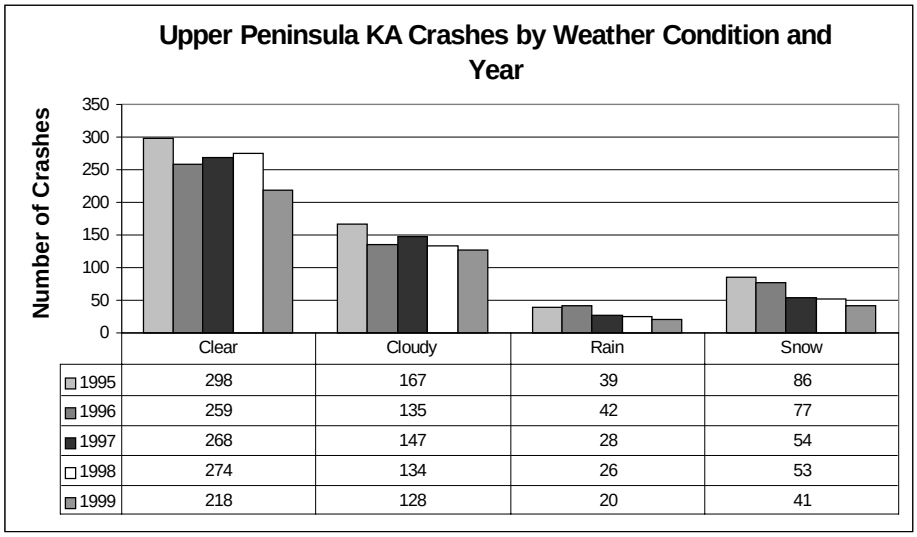
	Dry	Wet	Icy	Snowy	Other
1995	10146	2528	869	798	83
1996	9282	2466	981	666	50
1997	8810	2304	764	568	63
1998	9308	1865	377	347	60
1999	8400	1600	446	461	63

Crashes by Weather Condition

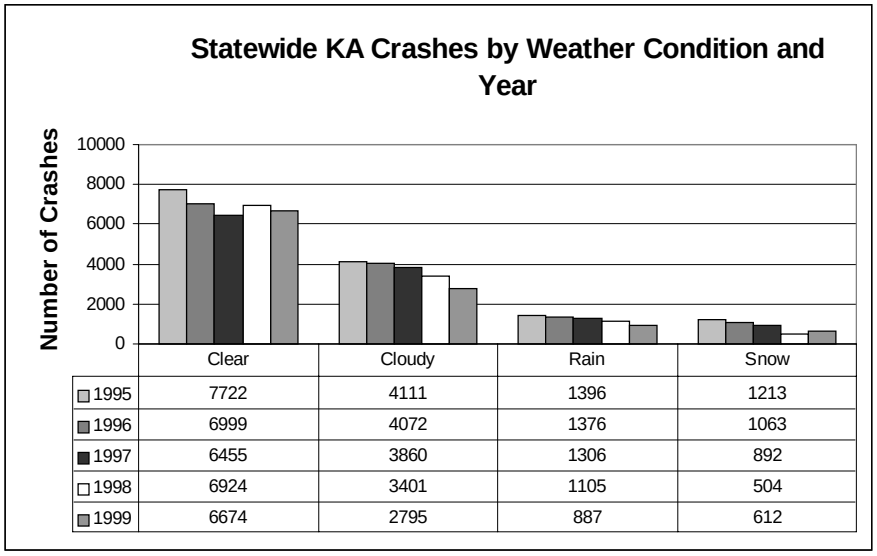


	Clear	Cloudy	Rain	Snow
1995	8206	5851	1225	2678
1996	8693	5852	1123	2359
1997	7851	5196	860	2121
1998	7987	4620	826	1532
1999	9280	4973	1110	1503

Snow is clearly a more significant problem in the UP than in the state taken as a whole.

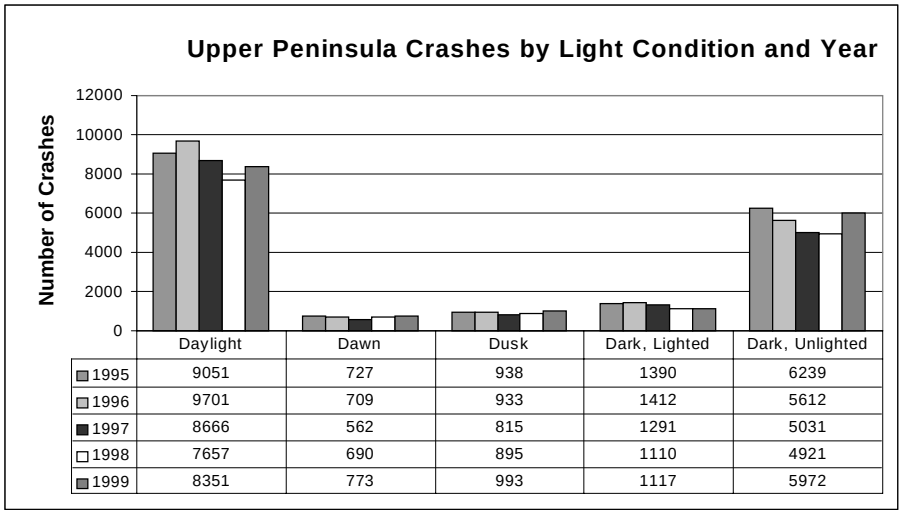


	Clear	Cloudy	Rain	Snow
1995	298	167	39	86
1996	259	135	42	77
1997	268	147	28	54
1998	274	134	26	53
1999	218	128	20	41



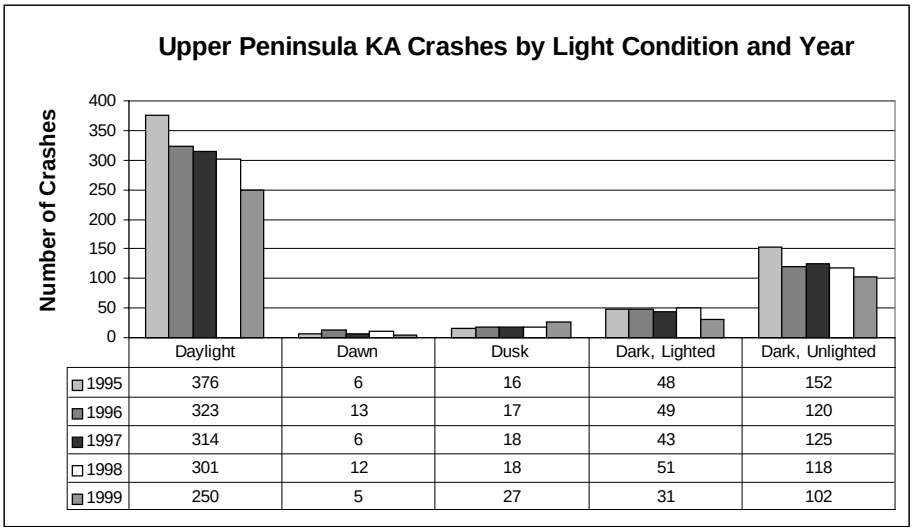
	Clear	Cloudy	Rain	Snow
1995	7722	4111	1396	1213
1996	6999	4072	1376	1063
1997	6455	3860	1306	892
1998	6924	3401	1105	504
1999	6674	2795	887	612

Crashes by Light Condition

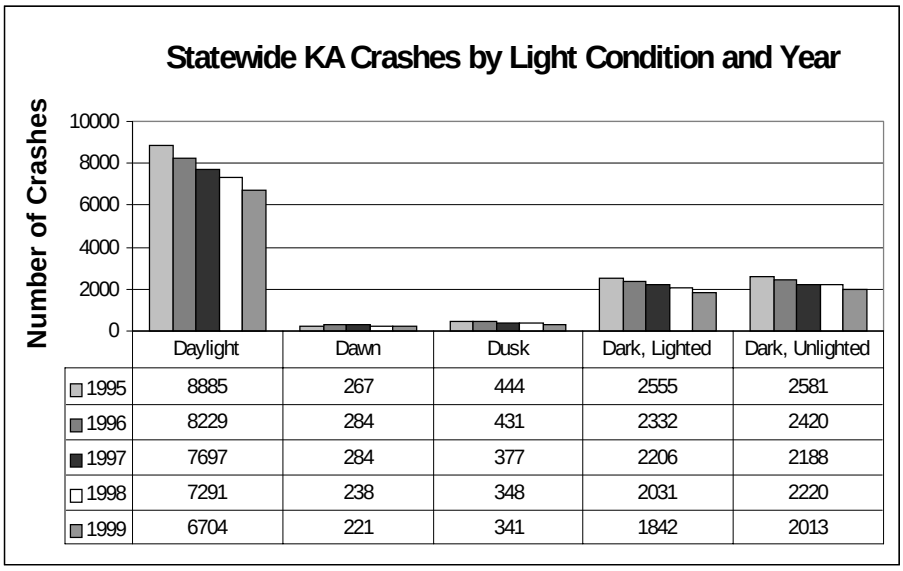


	Daylight	Dawn	Dusk	Dark, Lighted	Dark, Unlighted
1995	9051	727	938	1390	6239
1996	9701	709	933	1412	5612
1997	8666	562	815	1291	5031
1998	7657	690	895	1110	4921
1999	8351	773	993	1117	5972

While about the same proportion of crashes occur in the dark in the UP and the state taken as a whole, a greater pro-portoin of these crashes occur on unlighted roads in the UP.

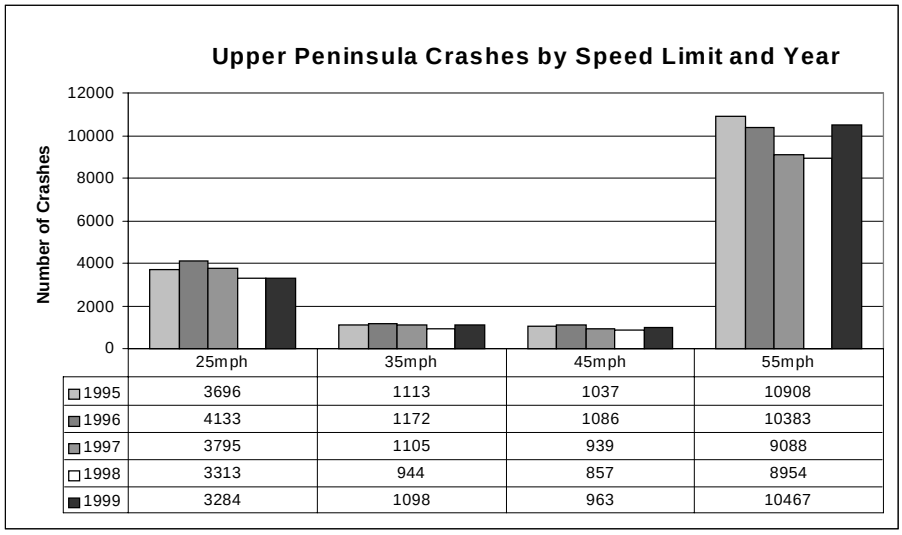


	Daylight	Dawn	Dusk	Dark, Lighted	Dark, Unlighted
1995	376	6	16	48	152
1996	323	13	17	49	120
1997	314	6	18	43	125
1998	301	12	18	51	118
1999	250	5	27	31	102



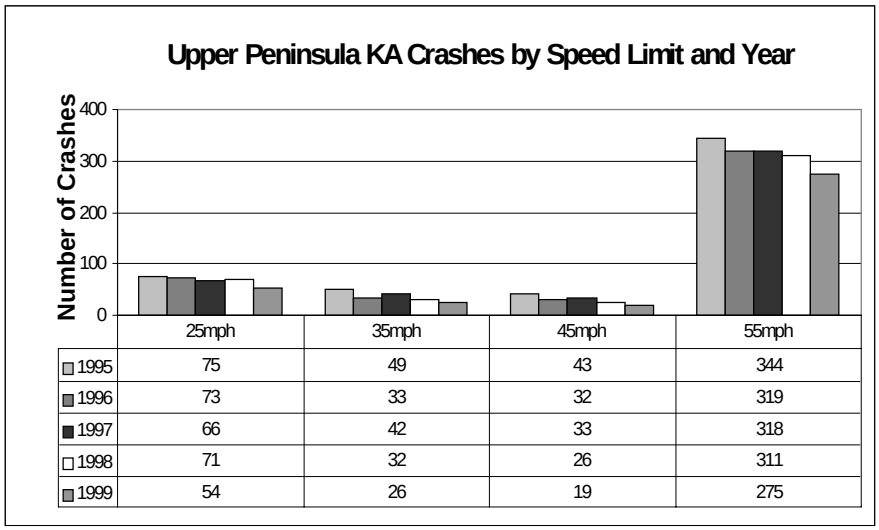
	Daylight	Dawn	Dusk	Dark, Lighted	Dark, Unlighted
1995	8885	267	444	2555	2581
1996	8229	284	431	2332	2420
1997	7697	284	377	2206	2188
1998	7291	238	348	2031	2220
1999	6704	221	341	1842	2013

Crashes by Speed Limit

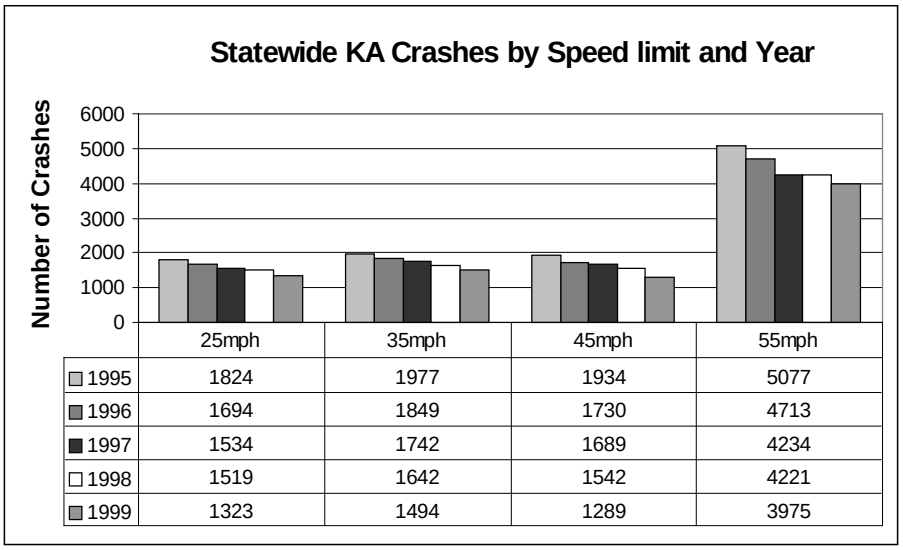


	25mph	35mph	45mph	55mph
1995	3696	1113	1037	10908
1996	4133	1172	1086	10383
1997	3795	1105	939	9088
1998	3313	944	857	8954
1999	3284	1098	963	10467

A much higher proportion of crashes in the UP occur on roads with a 55 mph speed limit than in the state as a whole.

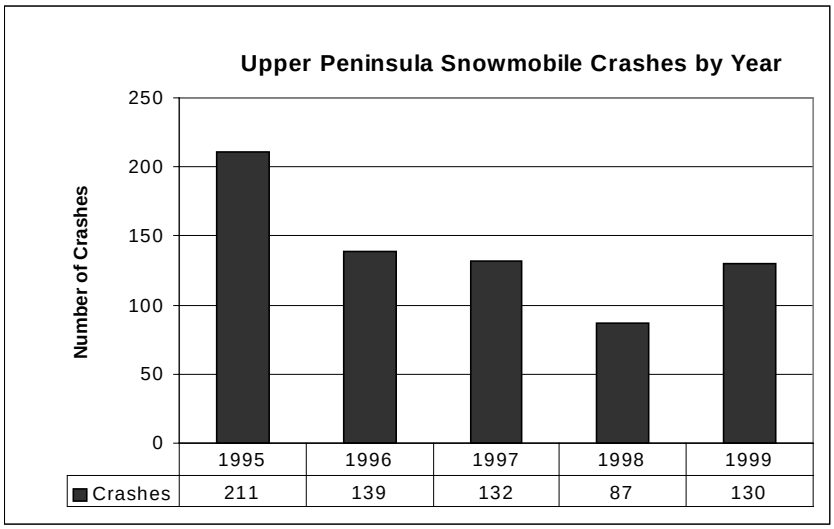


	25mph	35mph	45mph	55mph
1995	75	49	43	344
1996	73	33	32	319
1997	66	42	33	318
1998	71	32	26	311
1999	54	26	19	275

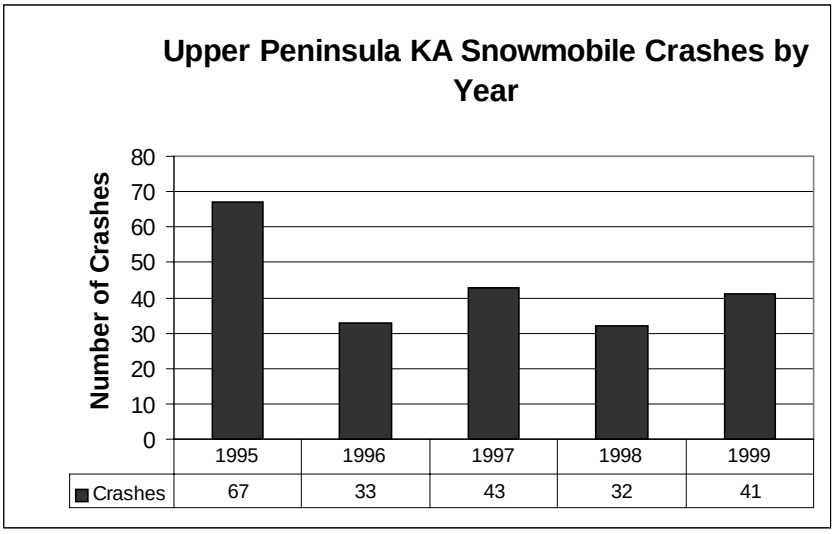


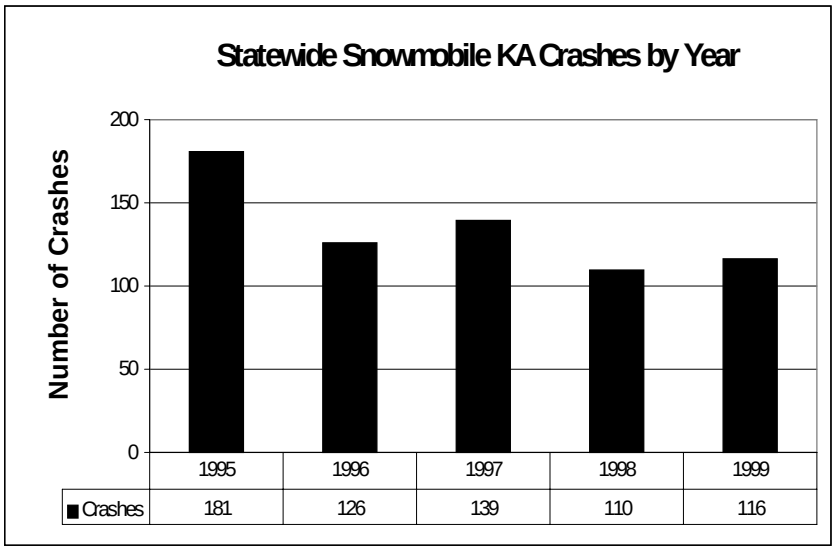
	25mph	35mph	45mph	55mph
1995	1824	1977	1934	5077
1996	1694	1849	1730	4713
1997	1534	1742	1689	4234
1998	1519	1642	1542	4221
1999	1323	1494	1289	3975

Snowmobile Crashes



The number of KA snowmobile crashes that occur each year in the UP is about the same as the total number of KA traffic crashes reported in Dickinson county each year (30-40).





Crashes by County

Upper Peninsula Crashes by County and Year															
Year	Alger	Baraga	Chippewa	Delta	Dickinson	Gogebic	Houghton	Iron	Keweenaw	Luce	Mackinac	Marquette	Menominee	Ontonagon	Schoolcraft
1995	560	655	1949	2432	1804	746	1544	1092	116	393	919	2998	1970	901	577
1996	654	612	1807	2659	1771	673	1505	900	85	394	1046	3200	1997	647	671
1997	471	493	1656	2465	1523	645	1320	897	79	329	1008	2765	1743	572	603
1998	403	510	1398	2252	1494	612	1256	1006	94	266	784	2446	1858	576	518
1999	609	560	1710	2482	1544	579	1372	1036	103	299	928	2668	2195	683	654
Total	2697	2830	8520	12290	8136	3255	6997	4931	477	1681	4685	14077	9763	3379	3023

Upper Peninsula KA Crashes by County and Year															
Year	Alger	Baraga	Chippewa	Delta	Dickinson	Gogebic	Houghton	Iron	Keweenaw	Luce	Mackinac	Marquette	Menominee	Ontonagon	Schoolcraft
1995	25	20	63	74	43	28	74	15	16	20	42	102	41	19	24
1996	22	16	50	55	35	18	49	29	8	19	36	99	48	24	21
1997	24	14	62	66	37	14	46	27	7	16	39	71	51	19	17
1998	12	20	52	50	30	27	73	20	11	9	31	81	45	14	27
1999	21	14	46	30	27	14	47	20	5	16	25	62	57	17	17
Total	104	84	273	275	172	101	289	111	47	80	173	415	242	93	106

Single-Vehicle Crashes by Hazardous Action

Upper Peninsula Single-Vehicle Crashes by Hazardous Action and Year

Year	None	Speed too Fast	Speed too Slow	Fail to Yield	Traffic Control	Wrong Way	Left of Center	Improper Passing	Improper Lane Use	Improper Turn	Improper Signal	Improper Backing	Clear Distance	Other	Unknown
1995	8960	1489	13	11	11	1	53	5	15	15	2	26	178	551	112
1996	8144	1659	7	11	11	6	54	8	15	25	8	39	134	508	87
1997	7251	1458	7	8	16	2	46	6	9	19	2	35	129	525	77
1998	7466	1170	12	9	13	4	43	7	11	27	1	23	116	558	64
1999	8986	1312	7	6	15	6	29	2	13	23	1	34	106	547	80
Total	40807	7088	46	45	66	19	225	28	63	109	14	157	663	2689	420

Upper Peninsula Single-Vehicle KA Crashes by Hazardous Action and Year

Year	None	Speed too Fast	Speed too Slow	Fail to Yield	Traffic Control	Wrong Way	Left of Center	Improper Passing	Improper Lane Use	Improper Turn	Improper Signal	Improper Backing	Clear Distance	Other	Unknown
1995	43	115	0	0	0	0	4	0	3	0	0	0	11	60	11
1996	34	103	0	0	3	1	6	1	2	0	0	0	6	54	1
1997	38	117	0	1	1	0	4	0	2	0	0	0	9	63	7
1998	40	116	0	2	5	2	6	0	0	0	0	0	7	71	8
1999	30	103	0	1	1	0	4	0	1	0	0	0	2	52	11
Total	185	554	0	4	10	3	24	1	8	0	0	0	35	300	38

Multiple-Vehicle Crashes by Hazardous Action

Upper Peninsula Multiple-Vehicle Crashes by Hazardous Action and Year

Year	None	Speed too Fast	Speed too Slow	Fail to Yield	Traffic Control	Wrong Way	Left of Center	Improper Passing	Improper Lane Use	Improper Turn	Improper Signal	Improper Backing	Clear Distance	Other	Unknown
1995	6754	661	33	1789	241	13	153	151	240	220	42	624	1672	565	191
1996	7579	754	23	2019	233	14	171	141	260	243	45	666	1898	655	251
1997	6725	603	24	1935	183	10	162	124	225	230	31	595	1520	613	218
1998	5609	380	20	1486	188	10	137	107	216	204	26	529	1481	556	194
1999	5938	512	25	1664	205	14	119	104	217	183	34	550	1554	549	187
Total	32605	2910	125	8893	1050	61	742	627	1158	1080	178	2964	8125	2938	1041

Upper Peninsula Multiple-Vehicle KA Crashes by Hazardous Action and Year

Year	None	Speed too Fast	Speed too Slow	Fail to Yield	Traffic Control	Wrong Way	Left of Center	Improper Passing	Improper Lane Use	Improper Turn	Improper Signal	Improper Backing	Clear Distance	Other	Unknown
1995	351	63	3	107	19	2	28	7	7	11	5	2	47	36	9
1996	319	47	3	99	12	3	20	6	4	5	1	0	51	46	12
1997	278	37	2	80	15	2	23	6	2	7	1	2	43	36	7
1998	250	37	0	81	11	2	19	8	6	5	1	2	23	44	7
1999	209	36	0	74	14	2	17	5	3	3	3	3	29	23	1
Total	1407	220	8	441	71	11	107	32	22	31	11	9	193	185	36

Crashes by Most Harmful Event

Upper Peninsula Crashes by Most Harmful Event and Year

Year	1995	1996	1997	1998	1999
Loss of Control	217	218	205	142	163
Cross Center/Median	84	61	48	39	125
Ran Off Road Left	79	59	57	42	40
Ran Off Road Right	101	100	59	61	64
Re-enter Road	16	12	7	5	16
Overturn	529	731	607	459	549
Separation of Unit	99	66	82	52	54
Fire / Explosion	33	44	28	44	55
Immersion	7	4	4	5	11
Jackknife	26	34	26	20	23
Dow nhill Runaw ay	3	2	5	2	1
Cargo Loss/shift	37	34	40	39	43
Individual Fell Off	73	37	47	33	42
Other Non-Collision	99	97	101	83	78
Pedestrian	68	85	78	84	71
Pedalcycle	90	85	78	84	71
MtrVeh. In Transport	10728	12372	10902	9402	10024
Parked Vehicle	791	874	864	706	707
Railw ay Train	15	11	13	7	7
Animal	7743	6914	6145	6454	7748
Other Nonfixed Object	200	274	275	259	232
Bridge pier/abut	17	12	16	18	15
Bridge Rail	14	21	14	10	
Gaurdrail face	121	114	112	100	
Guardrail End	28	22	16	12	
Median Barrier	11	8	16	9	
Traffic Sign Post	122	121	103	116	
Signal Post	17	17	6	5	
Luminaire Support	20	28	19	32	
Utility Pole	187	132	129	156	
Other Pole	50	57	29	32	
Culvert	36	24	34	28	
Curb	38	38	40	29	
Ditch	293	328	313	275	
Embankment	126	232	245	135	
Fence	44	33	19	30	
Mailbox	128	133	82	121	
Tree	655	489	469	534	
Rail Crossing Signal	5	5	2	2	
Building	35	33	38	37	
Traffic Island	1	1	1	1	
Fire Hydrant	23	20	15	23	
Impact attenuater	4	2	1	1	
Other Fixed Object	172	222	219	147	
No Harmful Event	2529	2398	2020	1541	

Upper Peninsula KA Crashes by Most Harmful Event and Year					
Year	1995	1996	1997	1998	1999
Loss of Control	11	14	10	15	6
Cross Center/Median	1	4	4	4	2
Ran Off Road Left	3	4	2	0	2
Ran Off Road Right	7	3	3	3	4
Re-enter Road	1	0	2	2	1
Overturn	71	63	72	71	57
Separation of Unit	10	3	1	2	0
Fire / Explosion	0	1	1	1	0
Immersion	0	0	1	0	2
Jackknife	0	0	0	0	1
Dow nhill Runaw ay	0	0	0	0	0
Cargo Loss/shift	0	0	1	0	0
Individual Fell Off	24	17	19	21	22
Other Non-Collision	4	2	3	4	3
Pedestrian	23	28	24	23	13
Pedalcycle	14	13	10	10	10
MtrVeh. In Transport	560	524	429	407	354
Parked Vehicle	15	20	18	11	8
Railw ay Train	3	3	1	0	1
Animal	11	14	10	9	6
Other Nonfixed Objext	1	4	3	5	0
Bridge pier/abut	3	2	2	1	1
Bridge Parapet	0	1	0	0	0
Bridge Rail	0	0	0	0	0
Gaurdrail face	2	3	3	6	1
Guardrail End	3	2	1	0	2
Median Barrier	0	0	0	0	
Traffic Sign Post	2	2	3	1	
Signal Post	0	0	0	0	
Luminaire Support	0	1	0	1	
Utility Pole	14	11	4	13	
Other Pole	2	0	0	2	
Culvert	8	2	7	4	
Curb	1	0	1	1	
Ditch	15	16	27	23	
Embankmen-t	7	9	16	12	
Fence	2	0	0	2	
Mailbox	0	1	0	2	
Tree	70	47	59	65	
Rail Crossing Signal	0	1	0	0	
Building	0	2	1	3	
Traffic Island	0	0	0	0	
Fire Hydrant	0	1	0	1	
Impact attenuater	0	0	0	0	
Other Fixed Object	10	7	8	6	
No Harmful Event	91	59	62	51	

Had-Been-Drinking Crashes

Number of 'Had-Been Drinking Crashes' in the Upper Peninsula by Year						
Year	Number of Crashes	Number of KA Crashes	% KA	KA Rate per 100 Million VMT	KA Rate per 1000 Registered Vehicles	KA Rate per 1000 Population
1995	994	162	16.30%	5.36	0.54	0.52
1996	897	130	14.49%	4.20	0.42	0.42
1997	932	127	13.63%	4.04	0.41	0.41
1998	911	127	13.94%	4.05	0.40	0.41
1999	872	114	13.07%	3.58	0.35	0.37
Change 95 to 99	-12.27%	-29.63%	-19.78%	-33.14%	-34.06%	-29.26%
Change 98 to 99	-4.28%	-10.24%	-6.22%	-11.56%	-12.10%	-9.82%

Statewide Number and Rate of Fatal or Serious Injury Crashes 'Had-Been Drinking Crashes'					
Year	Number of Crashes	Rate per 100 Million VMT	Rate per 1000 Registered Vehicles	Rate per 1000 Populat.	Rate per 1000 Drivers of Record
1995	3198	3.732	0.372	0.334	0.463
1996	2781	3.172	0.310	0.288	0.398
1997	2635	2.953	0.291	0.271	0.371
1998	2518	2.833	0.274	0.257	0.352
1999	2363	2.539	0.251	0.241	0.327
Change 95 to 99	-26.11%	-31.96%	-32.46%	-27.88%	-29.36%
Change 98 to 99	-6.16%	-10.37%	-8.36%	-6.49%	-7.04%

Number and Rate of Fatal or Serious Injury 'Had-Been Drinking' Crashes					
	Year	Number of Crashes	Rate per 100 Million VMT	Rate per 1000 Registered Vehicles	Rate per 1000 Populat.
Upper Peninsula	1999	114	3.580	0.350	0.370
Statew ide	1999	2363	2.539	0.251	0.241
Difference UP vs. State			40.99%	39.32%	53.77%

The Upper Peninsula has a much higher rate of HBD crashes than does the state as a whole.

Had-Been-Drinking Crashes by County

Upper Peninsula 'Had-Been Drinking Crashes' by County and Year															
Year	Alger	Baraga	Chippew a	Delta	Dickinson	Gogebic	Houghton	Iron	Kew eenaw	Luce	Mackinac	Marquette	Menominee	Ontonagon	Schoolcraft
1995	35	25	137	114	67	56	98	48	20	25	60	151	86	41	31
1996	43	22	118	97	70	40	99	37	13	15	56	135	84	30	38
1997	33	22	105	87	64	39	68	44	8	10	52	141	69	31	36
1998	32	35	88	80	50	42	72	42	10	16	55	138	73	29	20
1999	30	19	110	92	45	37	73	40	10	17	44	117	69	18	27

Upper Peninsula 'Had-Been Drinking KA Crashes' by County and Year															
Year	Alger	Baraga	Chippew a	Delta	Dickinson	Gogebic	Houghton	Iron	Kew eenaw	Luce	Mackinac	Marquette	Menominee	Ontonagon	Schoolcraft
1995	7	3	18	23	12	8	19	4	6	6	13	17	15	6	5
1996	9	4	10	11	8	5	15	5	4	1	11	20	14	7	6
1997	5	3	18	12	15	2	10	8	1	3	7	23	11	4	5
1998	1	8	16	8	10	5	18	5	3	1	11	22	11	4	4
1999	4	2	17	8	6	5	15	6	3	7	5	19	10	5	2

Single- and Multiple-Vehicle Had-Been-Drinking Crashes by Hazardous Action

Upper Peninsula Drunk Driver Single-Vehicle Crashes by Hazardous Action and Year

Year	None	Speed too Fast	Speed too Slow	Fail to Yield	Traffic Control	Wrong Way	Left of Center	Improper Passing	Improper Lane Use	Improper Turn	Improper Signal	Improper Backing	Clear Distance	Other	Unknow n
1995	81	268	3	2	7	1	17	2	8	2	1	2	25	180	13
1996	51	295	0	3	4	0	21	1	3	4	1	5	21	171	5
1997	34	236	1	3	8	0	11	1	2	4	0	2	21	183	7
1998	36	204	2	3	8	0	12	0	3	4	0	2	14	191	8
1999	36	240	0	1	4	3	8	0	3	1	0	5	9	187	7

Upper Peninsula Drunk Driver Multiple-Vehicle Crashes by Hazardous Action and Year

Year	None	Speed too Fast	Speed too Slow	Fail to Yield	Traffic Control	Wrong Way	Left of Center	Improper Passing	Improper Lane Use	Improper Turn	Improper Signal	Improper Backing	Clear Distance	Other	Unknow n
1995	42	36	2	53	17	0	26	9	14	13	1	18	46	66	10
1996	49	30	0	50	12	0	19	5	5	4	0	11	49	61	4
1997	40	23	0	44	5	1	23	6	7	2	1	20	35	75	2
1998	30	27	1	43	9	2	20	5	8	6	2	15	39	71	3
1999	32	21	0	28	6	0	20	3	11	3	1	9	27	63	4

Single-Vehicle Had-Been-Drinking Crashes by Most Harmful Event

Upper Peninsula Drunk Driving Single-Vehicle Crashes by Most Harmful Event and Year					
Year	1995	1996	1997	1998	1999
Loss of Control	16	25	10	6	13
Cross Center/Median	2	1	1	1	2
Ran Off Road Left	16	6	6	4	4
Ran Off Road Right	9	13	12	10	8
Re-enter Road	1	0	0	0	0
Overturn	113	120	95	92	94
Separation of Unit	2	0	0	0	1
Fire / Explosion	5	5	2	2	2
Immersion	1	1	0	0	4
Jackknife	0	0	0	1	0
Downhill Runaway	0	0	1	0	0
Cargo Loss/shift	0	0	0	0	2
Individual Fell Off	13	6	4	4	9
Other Non-Collision	2	0	1	0	0
Pedestrian	0	1	1	0	0
Pedalcycle	0	0	0	0	0
MtrVeh. In Transport	0	0	1	0	1
Parked Vehicle	1	0	0	0	0
Railway Train	0	0	0	0	0
Animal	54	35	20	25	17
Other Nonfixed Objext	7	8	8	8	6
Bridge pier/abut	2	0	3	2	2
Bridge Parapet	0	0	0	1	1

Most KA-HBD crashes in the UP are single-vehicle crashes. These drivers hit objects on the roadside, mostly trees. They also overturn and end up in the roadside ditch.

Bridge Rail	2	2	2	1	0
Gaurdrail face	11	11	9	13	8
Guardrail End	4	3	2	1	3
Median Barrier	1	1	1	0	1
Traffic Sign Post	14	18	15	13	12
Signal Post	0	2	0	0	0
Luminaire Support	1	3	1	5	3
Utility Pole	33	29	28	43	33
Other Pole	3	6	2	6	2
Culvert	13	6	7	6	5
Curb	3	6	11	1	1
Ditch	61	67	63	50	75
Embankmen-t	22	30	39	22	29
Fence	12	11	4	9	9
Mailbox	13	15	8	11	12
Tree	126	99	108	119	100
Rail Crossing Signal	0	0	0	0	0
Building	5	8	2	5	5
Traffic Island	0	0	0	0	0
Fire Hydrant	3	2	3	3	2
Impact attenuater	0	0	0	0	0
Other Fixed Object	28	36	23	17	22
No Harmful Event	30	14	24	15	19

Multiple-Vehicle Had-Been-Drinking Crashes by Most Harmful Event

Upper Peninsula Drunk Driving Multiple-Vehicle Crashes by Most Harmful Event and Year					
Year	1995	1996	1997	1998	1999
Loss of Control	5	6	1	1	2
Cross Center/Median	0	0	1	0	1
Ran Off Road Left	1	0	0	0	0
Ran Off Road Right	2	1	0	1	0
Re-enter Road	1	0	0	0	1
Overturn	3	3	4	1	2
Separation of Unit	3	0	1	2	1
Fire / Explosion	0	0	0	0	0
Immersion	0	0	0	0	0
Jackknife	0	0	0	0	0
Downhill Runaway	0	0	1	0	0
Cargo Loss/shift	0	2	0	0	0
Individual Fell Off	0	0	1	0	0
Other Non-Collision	0	0	0	0	0
Pedestrian	4	4	4	6	2
Pedalcycle	0	1	1	1	2
MtrVeh. In Transport	234	225	180	195	156
Parked Vehicle	62	46	59	53	48
Railway Train	4	0	2	1	2
Animal	0	0	0	0	0
Other Nonfixed Objext	1	1	1	2	0
Bridge pier/abut	0	0	0	0	0
Bridge Parapet	0	0	0	0	0
Bridge Rail	0	0	0	0	0
Gaurdrail face	1	0	1	1	0
Guardrail End	0	0	1	0	0
Median Barrier	0	0	0	0	0
Traffic Sign Post	0	0	0	1	0
Signal Post	0	0	0	0	0
Luminaire Support	0	0	0	0	0
Utility Pole	2	1	1	1	1
Other Pole	0	0	0	0	0
Culvert	0	0	0	0	0
Curb	0	0	0	1	0
Ditch	1	0	1	0	2
Embankment	1	0	1	1	0
Fence	0	0	0	0	0
Mailbox	1	0	0	1	0
Tree	1	1	0	1	1
Rail Crossing Signal	0	0	0	0	0
Building	1	1	0	1	2
Traffic Island	0	0	0	0	0
Fire Hydrant	0	0	0	0	0
Impact attenuater	0	0	0	0	0
Other Fixed Object	0	0	0	0	0
No Harmful Event	33	14	26	14	13

Total Crashes and KA Crashes Listed by County

ALGER COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	560	25	4.46%	22.41	2.52	35	7
1996	654	22	3.36%	18.49	2.22	43	9
1997	471	24	5.10%	21.35	2.40	33	5
1998	403	12	2.98%	10.40	1.20	32	1
1999	609	21	3.45%	18.50	2.08	30	4
Total	2697	104	3.86%	18.19	2.08	173	26

BARAGA COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	655	20	3.05%	22.13	2.36	25	3
1996	612	16	2.61%	15.61	1.89	22	4
1997	493	14	2.84%	12.54	1.66	22	3
1998	510	20	3.92%	18.31	2.33	35	8
1999	560	14	2.50%	12.83	1.61	19	2
Total	2830	84	2.97%	16.07	1.97	123	20

CHIPPEWA COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	1949	63	3.23%	18.56	1.71	137	18
1996	1807	50	2.77%	14.11	1.34	118	10
1997	1656	62	3.74%	17.32	1.64	105	18
1998	1398	52	3.72%	15.61	1.37	88	16
1999	1710	46	2.69%	13.41	1.21	110	17
Total	8520	273	3.20%	15.80	1.45	558	79

DELTA COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	2432	74	3.04%	19.37	1.91	114	23
1996	2659	55	2.07%	14.49	1.42	97	11
1997	2465	66	2.68%	17.04	1.70	87	12
1998	2252	50	2.22%	12.70	1.28	80	8
1999	2482	30	1.21%	7.37	0.77	92	8
Total	12290	275	2.24%	14.11	1.42	470	62

DICKINSON COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	1804	43	2.38%	20.75	1.58	67	12
1996	1771	35	1.98%	16.71	1.29	70	8
1997	1523	37	2.43%	17.82	1.36	64	15
1998	1494	30	2.01%	14.01	1.11	50	10
1999	1544	27	1.75%	12.37	1.00	45	6
Total	8136	172	2.11%	16.28	1.27	296	51

GOGEBIC COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	746	28	3.75%	18.30	1.57	56	8
1996	673	18	2.67%	11.69	1.02	40	5
1997	645	14	2.17%	8.94	0.80	39	2
1998	612	27	4.41%	17.06	1.57	42	5
1999	579	14	2.42%	8.43	0.82	37	5
Total	3255	101	3.10%	12.82	1.16	214	25

HOUGHTON COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	1544	74	4.79%	39.61	2.06	98	19
1996	1505	49	3.26%	25.40	1.36	99	15
1997	1320	46	3.48%	22.93	1.29	68	10
1998	1256	73	5.81%	35.20	2.05	72	18
1999	1372	47	3.43%	22.25	1.33	73	15
Total	6997	289	4.13%	28.93	1.62	410	77

IRON COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	1092	15	1.37%	11.75	1.14	15	4
1996	900	29	3.22%	22.41	2.22	29	5
1997	897	27	3.01%	19.28	2.08	27	8
1998	1006	20	1.99%	14.47	1.55	20	5
1999	1036	20	1.93%	13.58	1.56	20	6
Total	4931	111	2.25%	16.26	1.71	111	28

KEWEENAW COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	116	16	13.79%	58.54	8.19	20	6
1996	85	8	9.41%	27.70	4.02	13	4
1997	79	7	8.86%	23.90	3.40	8	1
1998	94	11	11.70%	36.13	5.24	10	3
1999	103	5	4.85%	16.75	2.33	10	3
Total	477	47	9.85%	32.24	4.59	61	17

LUCE COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	393	20	5.09%	29.43	3.58	25	6
1996	394	19	4.82%	30.06	2.93	15	1
1997	329	16	4.86%	24.62	2.42	10	3
1998	266	9	3.38%	15.43	1.33	16	1
1999	299	16	5.35%	28.07	2.37	17	7
Total	1681	80	4.76%	25.68	2.48	83	18

MACKINAC COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	919	42	4.57%	13.72	3.80	60	13
1996	1046	36	3.44%	12.45	3.25	56	11
1997	1008	39	3.87%	13.66	3.52	52	7
1998	784	31	3.95%	10.86	2.81	55	11
1999	928	25	2.69%	8.80	2.25	44	5
Total	4685	173	3.69%	11.93	3.12	267	47

MARQUETTE COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	2998	102	3.40%	18.28	1.56	151	17
1996	3200	99	3.09%	17.24	1.58	135	20
1997	2765	71	2.57%	12.20	1.14	141	23
1998	2446	81	3.31%	13.74	1.29	138	22
1999	2668	62	2.32%	10.37	0.99	117	19
Total	14077	415	2.95%	14.30	1.32	682	101

MENOMINEE COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	1970	41	2.08%	18.14	1.67	86	15
1996	1997	48	2.40%	19.75	1.96	84	14
1997	1743	51	2.93%	20.50	2.09	69	11
1998	1858	45	2.42%	18.52	1.84	73	11
1999	2195	57	2.60%	23.48	2.33	69	10
Total	9763	242	2.48%	20.11	1.98	381	61

ONTONAGON COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	901	19	2.11%	17.70	2.21	41	6
1996	647	24	3.71%	21.35	2.96	30	7
1997	572	19	3.32%	16.22	2.35	31	4
1998	576	14	2.43%	11.52	1.79	29	4
1999	683	17	2.49%	13.84	2.22	18	5
Total	3379	93	2.75%	16.00	2.31	149	26

SCHOOLCRAFT COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	577	24	4.16%	17.97	2.76	31	5
1996	671	21	3.13%	14.85	2.44	38	6
1997	603	17	2.82%	12.31	1.95	36	5
1998	518	27	5.21%	19.39	3.07	20	4
1999	654	17	2.60%	12.70	1.93	27	2
Total	3023	106	3.51%	15.45	2.43	152	22

County Specific Crash, Travel, Demographic, Economic Data

Counties are listed in this section in order of the most to the fewest KA crashes during the period 1995 to 1999. Specifically, Marquette County had the most KA crashes from 1995 to 1999 (415) and Keeweenaw County had the fewest KA crashes from 1995 to 1999 (47).

MARQUETTE COUNTY							
Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	2998	102	3.40%	18.28	1.56	151	17
1996	3200	99	3.09%	17.24	1.58	135	20
1997	2765	71	2.57%	12.20	1.14	141	23
1998	2446	81	3.31%	13.74	1.29	138	22
1999	2668	62	2.32%	10.37	0.99	117	19
Total	14077	415	2.95%	14.30	1.32	682	101

POPULATION STATISTICS	
1999 Population	62,758
Pop. Ranking in UP	1
% Pop. Change 98-99	0.30%
1999 Population 21+	43,135
1999 # of Licensed Drivers	45,867

ECONOMICS	
Median Household Income 1997 $	$35,478
% Persons Below Poverty 1997	11.30%
Unemployment Rate 1996	6.30%

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	106	63
1999 Alcohol Gross Sales	$522,390	$2,372,549
99 Alcohol Sales /Population 21+	$12.11	$55.00
1999 Alcohol Sales /Licensed Driver	$11.39	$51.73
1997 Alcohol Licenses /1000 Pop. 21+	2.46	1.46
1997 Alcohol Licenses /1000 Licensed Drivers	2.31	1.37

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	368,722
LS-2-5 (thousands) (County/Local/City)	229,078
LS-1-5 (thousands)	597,800
LS-6 (thousands) (Federally Owned)	0
Total (thousands)	597,800

LAND CHARACTERISTICS	
Forest %	85.70%
Land Area Square Miles 1990	1,821
Inland Water Square Miles 1990	51
Persons per Square Mile 1999	34.5
Deer Crashes 1999	677

RACE AND EDUCATION	
% Population White 1999	95.60%
% Population Black 1999	2.00%
% Population Amer. Indian 1999	1.30%
% High School Graduates 1990	81.80%
% College Graduates 1990	20.30%

HOUGHTON COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	1544	74	4.79%	39.61	2.06	98	19
1996	1505	49	3.26%	25.40	1.36	99	15
1997	1320	46	3.48%	22.93	1.29	68	10
1998	1256	73	5.81%	35.20	2.05	72	18
1999	1372	47	3.43%	22.25	1.33	73	15
Total	6997	289	4.13%	28.93	1.62	410	77

POPULATION STATISTICS	
1999 Population	35,448
Pop. Ranking in UP	4
% Pop. Change 98-99	-0.50%
1999 Population 21+	23,986
1999 # of Licensed Drivers	23,404

ECONOMICS	
Median Household Income 1997 $	$28,170
% Persons Below Poverty 1997	15.00%
Unemployment Rate 1996	6.80%

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	66	38
1999 Alcohol Gross Sales	$504,487	$971,564
99 Alcohol Sales /Population 21+	$21.03	$40.51
1999 Alcohol Sales /Licensed Driver	$21.56	$41.51
1997 Alcohol Licenses /1000 Pop. 21+	2.75	1.58
1997 Alcohol Licenses /1000 Licensed Drivers	2.82	1.62

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	165,151
LS-2-5 (thousands) (County/Local/City)	46,132
LS-1-5 (thousands)	211,283
LS-6 (thousands) (Federally Owned)	28
Total (thousands)	211,311

LAND CHARACTERISTICS	
Forest %	81.00%
Land Area Square Miles 1990	1,012
Inland Water Square Miles 1990	42
Persons per Square Mile 1999	15.5
Deer Crashes 1999	195

RACE AND EDUCATION	
% Population White 1999	96.30%
% Population Black 1999	0.90%
% Population Amer. Indian 1999	0.40%
% High School Graduates 1990	73.90%
% College Graduates 1990	18.00%

DELTA COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	2432	74	3.04%	19.37	1.91	114	23
1996	2659	55	2.07%	14.49	1.42	97	11
1997	2465	66	2.68%	17.04	1.70	87	12
1998	2252	50	2.22%	12.70	1.28	80	8
1999	2482	30	1.21%	7.37	0.77	92	8
Total	12290	275	2.24%	14.11	1.42	470	62

POPULATION STATISTICS	
1999 Population	38,848
Pop. Ranking in UP	2
% Pop. Change 98-99	-0.20%
1999 Population 21+	27,314
1999 # of Licensed Drivers	29,704

ECONOMICS	
Median Household Income 1997 $	$33,301
% Persons Below Poverty 1997	12.20%
Unemployment Rate 1996	8.30%

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	76	49
1999 Alcohol Gross Sales	$404,136	$1,419,470
99 Alcohol Sales /Population 21+	$14.80	$51.97
1999 Alcohol Sales /Licensed Driver	$13.61	$47.79
1997 Alcohol Licenses /1000 Pop. 21+	2.78	1.79
1997 Alcohol Licenses /1000 Licensed Drivers	2.56	1.66

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	273,034
LS-2-5 (thousands) (County/Local/City)	133,818
LS-1-5 (thousands)	406,852
LS-6 (thousands) (Federally Owned)	111
Total (thousands)	406,964

LAND CHARACTERISTICS	
Forest %	78.70%
Land Area Square Miles 1990	1,170
Inland Water Square Miles 1990	26
Persons per Square Mile 1999	33.2
Deer Crashes 1999	1,262

RACE AND EDUCATION	
% Population White 1999	91.30%
% Population Black 1999	5.00%
% Population Amer. Indian 1999	3.30%
% High School Graduates 1990	76.90%
% College Graduates 1990	11.30%

CHIPPEWA COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	1949	63	3.23%	18.56	1.71	137	18
1996	1807	50	2.77%	14.11	1.34	118	10
1997	1656	62	3.74%	17.32	1.64	105	18
1998	1398	52	3.72%	15.61	1.37	88	16
1999	1710	46	2.69%	13.41	1.21	110	17
Total	8520	273	3.20%	15.80	1.45	558	79

POPULATION STATISTICS	
1999 Population	37,904
Pop. Ranking in UP	3
% Pop. Change 98-99	0.00%
1999 Population 21+	27,201
1999 # of Licensed Drivers	23,774

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	70	61
1999 Alcohol Gross Sales	$585,458	$1,594,585
99 Alcohol Sales /Population 21+	$21.52	$58.62
1999 Alcohol Sales /Licensed Driver	$24.63	$67.07
1997 Alcohol Licenses /1000 Pop. 21+	2.57	2.24
1997 Alcohol Licenses /1000 Licensed Drivers	2.94	2.57

ECONOMICS	
Median Household Income 1997 $	$30,477
% Persons Below Poverty 1997	14.70%
Unemployment Rate 1996	8.50%

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	207,166
LS-2-5 (thousands) (County/Local/City)	135,758
LS-1-5 (thousands)	342,924
LS-6 (thousands) (Federally Owned)	86
Total (thousands)	343,010

LAND CHARACTERISTICS	
Forest %	70.00%
Land Area Square Miles 1990	1,561
Inland Water Square Miles 1990	112
Persons per Square Mile 1999	24.3
Deer Crashes 1999	648

RACE AND EDUCATION	
% Population White 1999	82.10%
% Population Black 1999	6.60%
% Population Amer. Indian 1999	10.70%
% High School Graduates 1990	73.60%
% College Graduates 1990	10.80%

MENOMINEE COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	1970	41	2.08%	18.14	1.67	86	15
1996	1997	48	2.40%	19.75	1.96	84	14
1997	1743	51	2.93%	20.50	2.09	69	11
1998	1858	45	2.42%	18.52	1.84	73	11
1999	2195	57	2.60%	23.48	2.33	69	10
Total	9763	242	2.48%	20.11	1.98	381	61

POPULATION STATISTICS	
1999 Population	24,449
Pop. Ranking in UP	6
% Pop. Change 98-99	0.20%
1999 Population 21+	17,404
1999 # of Licensed Drivers	18,551

ECONOMICS	
Median Household Income 1997 $	$32,472
% Persons Below Poverty 1997	11.10%
Unemployment Rate 1996	6.00%

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	45	15
1999 Alcohol Gross Sales	$258,077	$250,432
99 Alcohol Sales /Population 21+	$14.83	$14.39
1999 Alcohol Sales /Licensed Driver	$13.91	$13.50
1997 Alcohol Licenses /1000 Pop. 21+	2.59	0.86
1997 Alcohol Licenses /1000 Licensed Drivers	2.42	0.81

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	164,309
LS-2-5 (thousands) (County/Local/City)	78,501
LS-1-5 (thousands)	242,810
LS-6 (thousands) (Federally Owned)	5
Total (thousands)	242,815

LAND CHARACTERISTICS	
Forest %	77.90%
Land Area Square Miles 1990	1,044
Inland Water Square Miles 1990	8
Persons per Square Mile 1999	23.4
Deer Crashes 1999	1,480

RACE AND EDUCATION	
% Population White 1999	98.20%
% Population Black 1999	0.00%
% Population Amer. Indian 1999	1.50%
% High School Graduates 1990	74.30%
% College Graduates 1990	9.30%

MACKINAC COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	919	42	4.57%	13.72	3.80	60	13
1996	1046	36	3.44%	12.45	3.25	56	11
1997	1008	39	3.87%	13.66	3.52	52	7
1998	784	31	3.95%	10.86	2.81	55	11
1999	928	25	2.69%	8.80	2.25	44	5
Total	4685	173	3.69%	11.93	3.12	267	47

POPULATION STATISTICS	
1999 Population	11,103
Pop. Ranking in UP	9
% Pop. Change 98-99	0.60%
1999 Population 21+	8,026
1999 # of Licensed Drivers	9,359

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	54	34
1999 Alcohol Gross Sales	$156,718	$561,150
99 Alcohol Sales /Population 21+	$19.53	$69.92
1999 Alcohol Sales /Licensed Driver	$16.75	$59.96
1997 Alcohol Licenses /1000 Pop. 21+	6.73	4.24
1997 Alcohol Licenses /1000 Licensed Drivers	5.77	3.63

ECONOMICS	
Median Household Income 1997 $	$28,367
% Persons Below Poverty 1997	11.80%
Unemployment Rate 1996	10.30%

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	216,743
LS-2-5 (thousands) (County/Local/City)	67,327
LS-1-5 (thousands)	284,070
LS-6 (thousands) (Federally Owned)	60
Total (thousands)	284,130

LAND CHARACTERISTICS	
Forest %	79.40%
Land Area Square Miles 1990	1,022
Inland Water Square Miles 1990	71
Persons per Square Mile 1999	10.9
Deer Crashes 1999	578

RACE AND EDUCATION	
% Population White 1999	84.20%
% Population Black 1999	0.30%
% Population Amer. Indian 1999	15.30%
% High School Graduates 1990	71.40%
% College Graduates 1990	10.40%

DICKINSON COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	1804	43	2.38%	20.75	1.58	67	12
1996	1771	35	1.98%	16.71	1.29	70	8
1997	1523	37	2.43%	17.82	1.36	64	15
1998	1494	30	2.01%	14.01	1.11	50	10
1999	1544	27	1.75%	12.37	1.00	45	6
Total	8136	172	2.11%	16.28	1.27	296	51

POPULATION STATISTICS	
1999 Population	26,944
Pop. Ranking in UP	5
% Pop. Change 98-99	-0.40%
1999 Population 21+	19,262
1999 # of Licensed Drivers	21,300

ECONOMICS	
Median Household Income 1997 $	$35,854
% Persons Below Poverty 1997	9.20%
Unemployment Rate 1996	5.70%

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	55	21
1999 Alcohol Gross Sales	$297,893	$200,044
99 Alcohol Sales /Population 21+	$15.47	$10.39
1999 Alcohol Sales /Licensed Driver	$13.99	$9.39
1997 Alcohol Licenses /1000 Pop. 21+	2.86	1.09
1997 Alcohol Licenses /1000 Licensed Drivers	2.58	0.99

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	145,979
LS-2-5 (thousands) (County/Local/City)	72,295
LS-1-5 (thousands)	218,274
LS-6 (thousands) (Federally Owned)	0
Total (thousands)	218,274

LAND CHARACTERISTICS	
Forest %	80.10%
Land Area Square Miles 1990	766
Inland Water Square Miles 1990	11
Persons per Square Mile 1999	35.2
Deer Crashes 1999	869

RACE AND EDUCATION	
% Population White 1999	98.70%
% Population Black 1999	0.20%
% Population Amer. Indian 1999	0.50%
% High School Graduates 1990	78.50%
% College Graduates 1990	13.00%

IRON COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	1092	15	1.37%	11.75	1.14	15	4
1996	900	29	3.22%	22.41	2.22	29	5
1997	897	27	3.01%	19.28	2.08	27	8
1998	1006	20	1.99%	14.47	1.55	20	5
1999	1036	20	1.93%	13.58	1.56	20	6
Total	4931	111	2.25%	16.26	1.71	111	28

POPULATION STATISTICS	
1999 Population	12,817
Pop. Ranking in UP	8
% Pop. Change 98-99	-0.50%
1999 Population 21+	9,735
1999 # of Licensed Drivers	10,069

ECONOMICS	
Median Household Income 1997 $	$25,527
% Persons Below Poverty 1997	13.60%
Unemployment Rate 1996	8.30%

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	43	19
1999 Alcohol Gross Sales	$141,447	$397,946
99 Alcohol Sales /Population 21+	$14.53	$40.88
1999 Alcohol Sales /Licensed Driver	$14.05	$39.52
1997 Alcohol Licenses /1000 Pop. 21+	4.42	1.95
1997 Alcohol Licenses /1000 Licensed Drivers	4.27	1.89

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	90,861
LS-2-5 (thousands) (County/Local/City)	56,410
LS-1-5 (thousands)	147,271
LS-6 (thousands) (Federally Owned)	37
Total (thousands)	147,308

LAND CHARACTERISTICS	
Forest %	85.40%
Land Area Square Miles 1990	1,166
Inland Water Square Miles 1990	45
Persons per Square Mile 1999	11
Deer Crashes 1999	697

RACE AND EDUCATION	
% Population White 1999	97.80%
% Population Black 1999	1.10%
% Population Amer. Indian 1999	0.70%
% High School Graduates 1990	73.00%
% College Graduates 1990	10.00%

SCHOOLCRAFT COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	577	24	4.16%	17.97	2.76	31	5
1996	671	21	3.13%	14.85	2.44	38	6
1997	603	17	2.82%	12.31	1.95	36	5
1998	518	27	5.21%	19.39	3.07	20	4
1999	654	17	2.60%	12.70	1.93	27	2
Total	3023	106	3.51%	15.45	2.43	152	22

POPULATION STATISTICS	
1999 Population	8,788
Pop. Ranking in UP	11
% Pop. Change 98-99	0.10%
1999 Population 21+	6,377
1999 # of Licensed Drivers	6,771

ECONOMICS	
Median Household Income 1997 $	$28,681
% Persons Below Poverty 1997	15.60%
Unemployment Rate 1996	11.70%

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	25	25
1999 Alcohol Gross Sales	$91,933	$280,845
99 Alcohol Sales /Population 21+	$14.42	$44.04
1999 Alcohol Sales /Licensed Driver	$13.58	$41.48
1997 Alcohol Licenses /1000 Pop. 21+	3.92	3.92
1997 Alcohol Licenses /1000 Licensed Drivers	3.70	3.70

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	107,895
LS-2-5 (thousands) (County/Local/City)	25,984
LS-1-5 (thousands)	133,879
LS-6 (thousands) (Federally Owned)	63
Total (thousands)	133,942

LAND CHARACTERISTICS	
Forest %	69.10%
Land Area Square Miles 1990	1,178
Inland Water Square Miles 1990	44
Persons per Square Mile 1999	7.5
Deer Crashes 1999	342

RACE AND EDUCATION	
% Population White 1999	92.20%
% Population Black 1999	1.80%
% Population Amer. Indian 1999	5.80%
% High School Graduates 1990	71.60%
% College Graduates 1990	8.90%

ALGER COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	560	25	4.46%	22.41	2.52	35	7
1996	654	22	3.36%	18.49	2.22	43	9
1997	471	24	5.10%	21.35	2.40	33	5
1998	403	12	2.98%	10.40	1.20	32	1
1999	609	21	3.45%	18.50	2.08	30	4
Total	2697	104	3.86%	18.19	2.08	173	26

POPULATION STATISTICS	
1999 Population	10,083
Pop. Ranking in UP	10
% Pop. Change 98-99	1.00%
1999 Population 21+	7,301
1999 # of Licensed Drivers	7,120

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	30	28
1999 Alcohol Gross Sales	$146,966	$333,271
99 Alcohol Sales /Population 21+	$20.13	$45.65
1999 Alcohol Sales /Licensed Driver	$20.64	$46.81
1997 Alcohol Licenses /1000 Pop. 21+	4.10	3.84
1997 Alcohol Licenses /1000 Licensed Drivers	4.21	3.93

ECONOMICS	
Median Household Income 1997 $	$31,877
% Persons Below Poverty 1997	11.80%
Unemployment Rate 1996	7.40%

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	93,922
LS-2-5 (thousands) (County/Local/City)	19,579
LS-1-5 (thousands)	113,501
LS-6 (thousands) (Federally Owned)	86
Total (thousands)	113,586

LAND CHARACTERISTICS	
Forest %	87.70%
Land Area Square Miles 1990	918
Inland Water Square Miles 1990	29
Persons per Square Mile 1999	11.0
Deer Crashes 1999	296

RACE AND EDUCATION	
% Population White 1999	91.30%
% Population Black 1999	5.00%
% Population Amer. Indian 1999	3.30%
% High School Graduates 1990	73.00%
% College Graduates 1990	11.50%

GOGEBIC COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	746	28	3.75%	18.30	1.57	56	8
1996	673	18	2.67%	11.69	1.02	40	5
1997	645	14	2.17%	8.94	0.80	39	2
1998	612	27	4.41%	17.06	1.57	42	5
1999	579	14	2.42%	8.43	0.82	37	5
Total	3255	101	3.10%	12.82	1.16	214	25

POPULATION STATISTICS	
1999 Population	17,043
Pop. Ranking in UP	7
% Pop. Change 98-99	-1.20%
1999 Population 21+	12,660
1999 # of Licensed Drivers	12,792

ECONOMICS	
Median Household Income 1997 $	$26,003
% Persons Below Poverty 1997	15.70%
Unemployment Rate 1996	11.60%

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	58	17
1999 Alcohol Gross Sales	$147,176	$172,394
99 Alcohol Sales /Population 21+	$11.63	$13.62
1999 Alcohol Sales /Licensed Driver	$11.51	$13.48
1997 Alcohol Licenses /1000 Pop. 21+	4.58	1.34
1997 Alcohol Licenses /1000 Licensed Drivers	4.53	1.33

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	104,123
LS-2-5 (thousands) (County/Local/City)	61,910
LS-1-5 (thousands)	166,033
LS-6 (thousands) (Federally Owned)	92
Total (thousands)	166,125

LAND CHARACTERISTICS	
Forest %	86.80%
Land Area Square Miles 1990	1,102
Inland Water Square Miles 1990	42
Persons per Square Mile 1999	15.5
Deer Crashes 1999	195

RACE AND EDUCATION	
% Population White 1999	96.50%
% Population Black 1999	1.70%
% Population Amer. Indian 1999	1.60%
% High School Graduates 1990	76.30%
% College Graduates 1990	11.40%

ONTONAGON COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	901	19	2.11%	17.70	2.21	41	6
1996	647	24	3.71%	21.35	2.96	30	7
1997	572	19	3.32%	16.22	2.35	31	4
1998	576	14	2.43%	11.52	1.79	29	4
1999	683	17	2.49%	13.84	2.22	18	5
Total	3379	93	2.75%	16.00	2.31	149	26

POPULATION STATISTICS	
1999 Population	7,668
Pop. Ranking in UP	13
% Pop. Change 98-99	-2.20%
1999 Population 21+	5,730
1999 # of Licensed Drivers	6,330

ECONOMICS	
Median Household Income 1997 $	$27,811
% Persons Below Poverty 1997	13.60%
Unemployment Rate 1996	16.70%

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	32	18
1999 Alcohol Gross Sales	$136,383	$215,743
99 Alcohol Sales /Population 21+	$23.80	$37.65
1999 Alcohol Sales /Licensed Driver	$21.55	$34.08
1997 Alcohol Licenses /1000 Pop. 21+	5.56	3.14
1997 Alcohol Licenses /1000 Licensed Drivers	5.06	2.84

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	86,013
LS-2-5 (thousands) (County/Local/City)	36,787
LS-1-5 (thousands)	122,800
LS-6 (thousands) (Federally Owned)	70
Total (thousands)	122,870

LAND CHARACTERISTICS	
Forest %	88.50%
Land Area Square Miles 1990	1,312
Inland Water Square Miles 1990	17
Persons per Square Mile 1999	5.8
Deer Crashes 1999	497

RACE AND EDUCATION	
% Population White 1999	98.30%
% Population Black 1999	0.20%
% Population Amer. Indian 1999	1.20%
% High School Graduates 1990	74.60%
% College Graduates 1990	9.20%

BARAGA COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	655	20	3.05%	22.13	2.36	25	3
1996	612	16	2.61%	15.61	1.89	22	4
1997	493	14	2.84%	12.54	1.66	22	3
1998	510	20	3.92%	18.31	2.33	35	8
1999	560	14	2.50%	12.83	1.61	19	2
Total	2830	84	2.97%	16.07	1.97	123	20

POPULATION STATISTICS	
1999 Population	8,672
Pop. Ranking in UP	12
% Pop. Change 98-99	0.80%
1999 Population 21+	6,183
1999 # of Licensed Drivers	6,100

ECONOMICS	
Median Household Income 1997 $	$29,412
% Persons Below Poverty 1997	11.80%
Unemployment Rate 1996	9.40%

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	19	16
1999 Alcohol Gross Sales	$64,339	$174,625
99 Alcohol Sales /Population 21+	$10.41	$28.24
1999 Alcohol Sales /Licensed Driver	$10.55	$28.63
1997 Alcohol Licenses /1000 Pop. 21+	3.07	2.59
1997 Alcohol Licenses /1000 Licensed Drivers	3.12	2.62

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	89,118
LS-2-5 (thousands) (County/Local/City)	19,966
LS-1-5 (thousands)	109,084
LS-6 (thousands) (Federally Owned)	9
Total (thousands)	109,093

LAND CHARACTERISTICS	
Forest %	85.50%
Land Area Square Miles 1990	904
Inland Water Square Miles 1990	25
Persons per Square Mile 1999	9.6
Deer Crashes 1999	344

RACE AND EDUCATION	
% Population White 1999	85.70%
% Population Black 1999	3.40%
% Population Amer. Indian 1999	10.60%
% High School Graduates 1990	70.50%
% College Graduates 1990	8.30%

LUCE COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	393	20	5.09%	29.43	3.58	25	6
1996	394	19	4.82%	30.06	2.93	15	1
1997	329	16	4.86%	24.62	2.42	10	3
1998	266	9	3.38%	15.43	1.33	16	1
1999	299	16	5.35%	28.07	2.37	17	7
Total	1681	80	4.76%	25.68	2.48	83	18

POPULATION STATISTICS	
1999 Population	6,754
Pop. Ranking in UP	14
% Pop. Change 98-99	0.50%
1999 Population 21+	4,907
1999 # of Licensed Drivers	4,618

ECONOMICS	
Median Household Income 1997 $	$28,252
% Persons Below Poverty 1997	16.40%
Unemployment Rate 1996	7.80%

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	21	20
1999 Alcohol Gross Sales	$34,256	$290,432
99 Alcohol Sales /Population 21+	$6.98	$59.19
1999 Alcohol Sales /Licensed Driver	$7.42	$62.89
1997 Alcohol Licenses /1000 Pop. 21+	4.28	4.08
1997 Alcohol Licenses /1000 Licensed Drivers	4.55	4.33

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	40,639
LS-2-5 (thousands) (County/Local/City)	10,371
LS-1-5 (thousands)	51,010
LS-6 (thousands) (Federally Owned)	0
Total (thousands)	51,010

LAND CHARACTERISTICS	
Forest %	79.70%
Land Area Square Miles 1990	903
Inland Water Square Miles 1990	24
Persons per Square Mile 1999	7.5
Deer Crashes 1999	165

RACE AND EDUCATION	
% Population White 1999	87.10%
% Population Black 1999	7.60%
% Population Amer. Indian 1999	5.00%
% High School Graduates 1990	69.60%
% College Graduates 1990	9.60%

KEWEENAW COUNTY

Year	Number of Total Crashes	Number of KA Crashes	% KA Crashes	KA Rate/100 Million VMT	KA Rate/1000 Population	Number of HBD Crashes	Number of HBD KA Crashes
1995	116	16	13.79%	58.54	8.19	20	6
1996	85	8	9.41%	27.70	4.02	13	4
1997	79	7	8.86%	23.90	3.40	8	1
1998	94	11	11.70%	36.13	5.24	10	3
1999	103	5	4.85%	16.75	2.33	10	3
Total	477	47	9.85%	32.24	4.59	61	17

POPULATION STATISTICS	
1999 Population	2,142
Pop. Ranking in UP	15
% Pop. Change 98-99	2.00%
1999 Population 21+	1,619
1999 # of Licensed Drivers	1,592

ALCOHOL STATISTICS		
	On-Premise	Off-Premise
1997 Alcohol Licenses	12	6
1999 Alcohol Gross Sales	$24,889	$24,944
99 Alcohol Sales /Population 21+	$15.37	$15.41
1999 Alcohol Sales /Licensed Driver	$15.63	$15.67
1997 Alcohol Licenses /1000 Pop. 21+	7.41	3.71
1997 Alcohol Licenses /1000 Licensed Drivers	7.54	3.77

ECONOMICS	
Median Household Income 1997 $	$24,887
% Persons Below Poverty 1997	11.30%
Unemployment Rate 1996	12.60%

AVMT INFORMATION	
LS-1 (thousands) (InterState, US Route and Michigan Route)	21,981
LS-2-5 (thousands) (County/Local/City)	7,874
LS-1-5 (thousands)	29,855
LS-6 (thousands) (Federally Owned)	0
Total (thousands)	29,855

LAND CHARACTERISTICS	
Forest %	82.80%
Land Area Square Miles 1990	541
Inland Water Square Miles 1990	48
Persons per Square Mile 1999	4
Deer Crashes 1999	42

RACE AND EDUCATION	
% Population White 1999	99.20%
% Population Black 1999	0.10%
% Population Amer. Indian 1999	0.20%
% High School Graduates 1990	64.30%
% College Graduates 1990	11.10%